

NAME INDEX

ANPRDI 23 (1-12) 1-456 (1986)

ISSN 0144-557X

Analytical Proceedings

Proceedings of the Analytical Division of
The Royal Society of Chemistry

Volume 23 1986

Published by
THE ROYAL SOCIETY OF CHEMISTRY
BURLINGTON HOUSE, LONDON W1V 0BN



Analytical Proceedings

Proceedings of the Analytical Division of The Royal Society of Chemistry

Officers of the Analytical Division of The Royal Society of Chemistry

President

D. C. M. Squirrell

Hon. Secretary
R. Sawyer

Hon. Assistant Secretary
D. I. Coomber

Hon. Publicity Secretary
C. J. Jackson

Hon. Treasurer
T. B. Pierce

Secretary
Miss P. E. Hutchinson

Editor, Analytical Proceedings
P. C. Weston

Senior Assistant Editors
J. Brew, R. A. Young

Assistant Editor
A. Horscroft

ANALYTICAL EDITORIAL BOARD

Chairman

J. D. R. Thomas

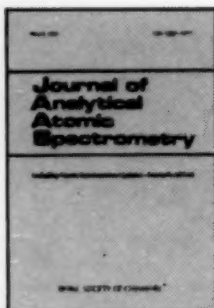
C. Burgess
M. S. Cresser
L. C. Ebdon

A. G. Fogg
C. W. Fuller
C. J. Jackson

*P. M. Maitlis
A. M. Ure
*P. C. Weston

*Ex officio members

© The Royal Society of Chemistry 1986. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photographic, recording, or otherwise, without the prior permission of the publishers.



JOURNAL OF ANALYTICAL ATOMIC SPECTROMETRY (JAAS)

An International Journal on the Development and Application
of Atomic Spectrometric Techniques

Editor: Judith Brew

U.S. Associate Editor: Dr J M Harnly

Journal of Analytical Atomic Spectrometry (JAAS) is a new international journal launched in February 1986, which contains original research papers, short papers, communications and letters concerned with the development and analytical application of atomic spectrometric techniques. JAAS is published bimonthly and includes comprehensive reviews on specific topics, general information and news of interest to analytical atomic spectroscopists, including information on forthcoming conferences and book reviews. Special issues of JAAS will be published, devoted to subjects highlighted by particular symposia. Also included in JAAS are the literature reviews previously covered in *Annual Reports on Analytical Atomic Spectroscopy*.

JAAS has a style and format similar to that of the well-established journal *The Analyst*. JAAS provides an improved publication service to support the growing research efforts in, and applications of, atomic spectrometric techniques.

Six issues per annum plus 2 special issues plus index 1987.

1987 Subscription £180.00 (\$356.00) Rest of World £202.00 RSC Members £36.00.

1986 Subscription £165.00 (\$319.00) Rest of World £182.00 RSC Members £33.00.



Ordering:

RSC Members should send their orders to: The Royal Society of Chemistry, Membership Manager, 30 Russell Square London WC1B 5DT. Non-RSC Members should send their orders to the Royal Society of Chemistry, Distribution Centre, Blackhorse Road, Letchworth, Herts SG6 1HN, U.K.

NAME INDEX

A

- Abbott, R. W., and Townshend, A. The chemiluminescence determination of drugs, 25.
 Adair, C. G., Thorburn Burns, D., and Harriott, M. Reversed-phase high-performance liquid chromatography of plasma melphalan and chlorambucil: comparison of three detection methods, 30.
 Adams, M. J., and Shand, C. A. Recent advances in chromatography. (Editorial), 45.
 Adnett, J. M., Smith, J. F., and Wilson, R. Melting-point of dithranol as a standard of purity, 264.
 Aggett, P. J. See Whitley, J. E.
 Akporhonor, E. E., Lee, J., and Taylor, D. R. Relationship between temperature-programmed and isothermal Kovats retention indices in gas-liquid chromatography, 163.
 Allison, I. See Cardenas S., F. A.
 Al-Sowdani, K. H. Candoluminescence spectrometry with a vidicon detector, 432.
 Altria, K. D., and Simpson, C. F. Measurement of electro-osmotic flows in high-voltage capillary zone electrophoresis, 453.
 Amberson, J. A., and Svehla, G. Voltammetric study of dihydroxamic acids, 443.
 Analytical Methods Committee. Evaluation of analytical instrumentation. Part III. Polychromators for use in emission spectrometry with ICP sources, 109.
 Ayling, C. See Smyth, W. F.

B

- Badwan, A. A., James, K. C., and Pugh, W. J. Purity determination of triethanolamine alkyl sulphates, 390.
 Barry, B. W. See Goodman, M.
 Battersby, C. M. See Churchouse, S. J.
 Beezer, A. E., Volpe, P. L. O., Gooch, C. A., and Hunter, W. H. Microcalorimetric bioassay and the development of a group additivity scheme for biological response, 399.
 Bennetto, H. P. See Delaney, G. M.
 Bergman, I. The detection of hazardous combustion in British coal mines with gas sensors, 274.
 Berry, A. J., Games, D. E., and Perkins, J. R. Supercritical fluid chromatography and its combination with mass spectrometry, 451.
 Boothroyd, S. A. Light scattering from fly ash, 51.
 Bott, B., and Jones, T. A. Multi-sensor systems in hazard monitoring, 61.
 Bouzid, B., and Macdonald, A. M. G. Flow injection determination of 5-fluorouracil with voltammetric detection, 295.
 Broderick, B. E. Role of NATLAS in quality control in chemical laboratories, 328.
 Brown, R. H. International symposium: workplace air monitoring diffusive sampling—an alternative approach. (Editorial), 137.
 Burns, I. W., and Nylander, C. I. An evaluation of a novel type of solid state sensor, 289.
 Bysouth, S. R., and Tyson, J. F. Comparison of curve-fitting algorithms for atomic-absorption spectrophotometry, 21.
 — and — On-line sample and standard manipulation for flame atomic absorption spectrometry, 412.

C

- Campbell, G. R., Harriott, M., and Thorburn Burns, D. Modified sample preparation and chromatography for the separation of human bile acid conjugates, 33.
 Campbell, W. C. See MacDonald, L. S.
 Cape, J. N., Milne, R., and Leith, I. D. Round the clock logging—the advantage of graphics, 156.

- Cardenas S., F. A., Cooksey, B. G., Ottaway, J. M., Allison, I., and Russell, M. J. The chemistry of a Precambrian soil profile, 10.
 Chadwick, N., Currell, B. R., and James, J. W. Analytical chemistry by open learning, 380.
 Christopher, A. J. Smoke without fire, 271.
 Churchouse, S. J., Mullen, W. H., Keedy, F. H., Battersby, C. M., and Vadgama, P. M. Studies on needle glucose electrodes, 146.
 — See Mullen, W. H.
 Clark, B. J. See Marr, J. G. D.; Milne, K. T.; Noctor, T. A. G.; Seaton, G. G. R.
 Clark, G. M. Some applications of thermosonimetry to organic crystals, 393.
 Clarke, P. A., McLeod, C. W., Mowthorpe, D. J., and Lee, D. J. Direct determination of volatile trace elements in nickel-base alloys by electrothermal vaporisation - inductively coupled plasma - atomic emission spectrometry, 15.
 Coates, C. F. The control of chemical process hazards, 119.
 Cobb, P. G. W. A message from the President of the Division, 174.
 Cochrane, G. C. Methods of analysis used for investigating whisky complaints, 357.
 Collett, J. H. See Phillips, A. J.
 Collins, D. N. Sampling and sampling problems relating to minerals, 352.
 Cook, I. G., McLeod, C. W., and Worsfold, P. J. Use of activated alumina as a column packing material for adsorption of oxyanions in flow injection analysis with ICP - AES detection, 5.
 Cook, S. W., Littlejohn, D., Ottaway, J. M., and Fell, G. S. Low resolution monochromator system for electrothermal atomic emission spectrometry with computer controlled background correction, 429.
 Cooksey, B. G. See Cardenas S., F. A.; MacDonald, L. S.
 Cope, M. J. Recipient of Hilger Spectroscopy Prize for 1985, 47.
 Crook, M. A. Awarded twelfth Analytical Division Distinguished Service Award, 45, 141.
 Currell, B. R. See Chadwick, N.

D

- Dagar, D. See Power, A.
 Dajer de Torrijos, L. A. See Kashanipour, M.
 Dalziel, J. A. W. See Eadington, D.
 Dawkins, J. V. Recipient of 1985 RSC award, 285.
 D'Costa, E. J. See Kress-Rogers, E.
 Delaney, G. M., Bennetto, H. P., Mason, J. R., Roller, S. D., Stirling, J. L., and Thurston, C. F. Electron transduction from enzymes and bacteria, 143.
 Denney, R. C. Editorial, 73.
 Denton, M. B. Plenary lecturer at SAC 86/3rd BNASS, 179.
 Dobson, K. The training of analysts for the pharmaceutical industry—industrial requirements, 325.

E

- Eadington, D., and Dalziel, J. A. W. Reductive determination of metal ions by flow injection analysis using amperometric amalgam detectors, 434.
 Ebdon, L. C. Appointed Professor of Analytical Chemistry, 344.
 — Awarded thirteenth SAC Silver Medal, 312.
 — 1986/7 schools lecturer, 45.
 — SAC 86/3rd BNASS: Update courses, 167.

- See Hill, S.; Norman, P.; Sparkes, S.; Walton, A. P.
 Eddowes, M. J., Pedley, D. G., and Webb, B. C. Enzyme-modified ion-sensitive field effect transistors: theoretical and practical considerations, 152.
 Edmonds, T. E. See Taylor, M. G.
 Egan, A. M. See Smyth, M. R.
 Egila, J. N., Littlejohn, D., Ottaway, J. M., and Xiao-quan, S. Clinical applications of electrothermal atomic absorption spectrometry with Zeeman-effect background correction, 426.
 Ersser, R. S. Chromatography of organic anions of clinical interest in physiological fluids, 305.
 Evans, S. See Kashanipour, M.

F

- Fearn, T. Some statistical comments on the errors in NIR calibrations, 123.
 Fell, A. F. See Marr, J. G. D.; Milne, K. T.; Noctor, T. A. G.; Seaton, G. G. R.
 Fell, G. S. See Cook, S. W.
 Firth, J. New member of Council, 377.
 Fisher, B. V. New member of Council, 377.
 Fogg, A. G. Retrospective view of SAC 86/3rd BNASS, 373.
 Frost, T. APL—the ideal programming language for HPLC optimisation, 265.

G

- Gasdzeko, V. P. Y., Moody, G. J., and Thomas, J. D. R. Lithium ion-selective electrodes in flow injection analysis, 62.
 Games, D. E. See Berry, A. J.
 Gentry, S. J., and Walsh, P. T. Calorimetric methods of gas detection, 59.
 Gibson, T. D., and Woodward, J. R. Automated determination of ethanol using the enzyme alcohol oxidase, 360.
 Gilbert, J. D. Did it fall or was it pushed? 273.
 Gill, R. See Hurdley, T. G.
 Gooch, C. A. See Bezzer, A. E.
 Goodman, M., and Barry, B. W. Differential scanning calorimetry of human stratum corneum: effects of penetration enhancers azone and dimethyl sulphoxide, 397.
 Grant, D. J. W. See York, P.
 Greenhow, E. J. See Kashanipour, M.
 Guest, L. Detection of chlorinated hydrocarbons with tin(IV) oxide, 58.

H

- Haines, P. J., and Skinner, G. A. Smoke and flame: the hazard and the remedy, 121.
 Hall, D. H., Littlejohn, D., Ottaway, J. M., and O'Haver, T. C. A software-controlled system for automatic background correction in inductively coupled plasma - optical emission spectrometry, 18.
 Halsey, S. A. Application of near infrared analysis in brewing, 126.
 Harriott, M. See Adair, C. G.; Campbell, G. R.
 Hart, J. P., and Hayler, P. J. Preliminary studies towards an assay for circulating vitamin B₆ levels in plasma using high-performance liquid chromatography with electrochemical detection, 439.
 Hayes, P. J., and Smyth, M. R. Voltammetric determination of inorganic lead and dimethyl- and trimethyllead species in mixtures, 34.
 Hayler, P. J. See Hart, J. P.
 Head, A. J. Reference materials for pesticide analysis, 56.

- Headridge, J. B. See Johnson, D.
 Heneghan, G., and Wallace, G. G. *In situ* complexation chromatography for the determination of metal ions, 29.
 Henman, B. A. The qualified person, 322.
 Hieftje, G. M. Models, measurements, methods and machines in analytical spectrometry, 382.
 Hill, S., Ebdon, L., and Jones, P. Novel approaches to directly coupled high-performance liquid chromatography - flame absorption spectrometry for trace metal speciation, 6.
 Hojabri, H., Lavin, A. C., Wallace, G. G., and Riviello, J. M. Indirect amperometric detection of metal ions following ion chromatographic separations, 26.
 Holcombe, D. G. Stability of pralidoxime mesylate injections, 320.
 Horváth, P. See Marr, J. G. D.
 Hulanicki, A. Obituary of Professor Wiktor Kemula, 77.
 Hunter, W. H. See Bezzer, A. E.
 Hurdley, T. G., Smith, R. M., Gill, R., and Moffat, A. C. Study of the HPLC separation of some local anaesthetics, 161.
 Hutchings, M. G. Organic reaction prediction by computer, 300.
 Hutchings, M. J., Moody, G. J., and Thomas, J. D. R. Voltammetry of copper dialkylidithiophosphates, 12.

J

- Jackson, K. W. See Johnson, D.
 James, J. W. See Chadwick, N.
 James, K. C. See Badwan, A. A.
 Jefferies, T. M. See Seymour, M. P.
 Jensen, O. J. See Mortensen, S.
 Johnson, D., Headridge, J. B., McLeod, C. W., Jackson, K. W., and Roberts, J. A. Direct determination of chromium in gallium arsenide by electrothermal atomisation atomic absorption spectrometry with Smith - Hieftje background correction, 8.
 Johnson, S. A. Trace gas detection using infrared lasers, 1.
 Johnston, D. C. Analytical microscopy of mineral phases, 353.
 Jones, J. G. Recipient of 1985 RSC award, 285.
 — SAC 86/3rd BNASS, 173.
 Jones, P. ROM-overlay programmes for the Spectra-Physics 4270 integrator. Application to HPLC column efficiency and suitability testing, 261.
 — See Hill, S.
 Jones, T. A. See Bott, B.

K

- Kahokola, K. V. See Roberts, D. J.
 Kashanipour, M., Evans, S., Dajer de Torrijos, L. A., and Greenhow, E. J. Evaluation of the reactivity of vinyl monomers by catalytic thermometric titrimetry, 436.
 Keatch, C. J. Awarded thirteenth Analytical Division Distinguished Service Award, 45, 141.
 Keedy, F. H. See Churthouse, S. J.; Mullen, W. H.
 Keen, M. J. R. Knowledge communication systems, 298.
 Kelly, R. G. See Parr, R. A.
 Kemula, W. Obituary, 77.
 Knox, J. H. Plenary lecturer at SAC 86/3rd BNASS, 179.
 Kress-Rogers, E., and D'Costa, E. J. Biosensors for the food industry, 149.

L

- Lander, J. A. Applications of the laser Raman microscope, 270.
 Larkins, L. A., and Westcott, S. G. The UV detector—its effect on HPLC system efficiency, 258.

- Lavin, A. C. See Hojabri, H.
 Leather, A. M. Obituary, 253.
 Lee, D. J. See Clarke, P. A.
 Lee, J. See Akporhonor, E. E.
 Leith, I. D. See Cape, J. N.
 Lines, R. W. Particle size measurement by auto-correlation spectroscopy, 51.
 Littlejohn, D. See Cook, S. W.; Egila, J. N.; Hall, D. H.
 Li Wan Po, A. Application of differential scanning calorimetry in pharmacy: prediction of solid state stability of drugs, 391.
 L'vov, B. V. Plenary lecturer at SAC 86/3rd BNASS, 180.

M

- Macdonald, A. M. G. See Bouzid, B.
 MacDonald, L. S., Cooksey, B. G., Ottaway, J. M., and Campbell, W. C. Automatic detergent analysis, 448.
 MacLeod, N. Validation of test methods for the quality assurance of explosives in the Ministry of Defence, 328.
 Manley, C. H. Determination of oil or fat in feeds and food. (Correspondence), 286.
 Marr, J. G. D., Horváth, P., Clark, B. J., and Fell, A. F. Assessment of peak homogeneity in HPLC by computer-aided photodiode array detection, 254.
 — See Seaton, G. G. R.
 Martin, M. J., and Rolfe, P. Potentiometric methods of *in vivo* analysis, 303.
 Mason, J. E. See Delaney, G. M.
 McCabe, S., and Ottaway, J. M. Novel method for the determination of arsenic, antimony and selenium in single-cell protein (Pruteen), 16.
 McCrum, W. A. Determination of dissolved humic substances in river waters using flow injection analysis with fluorimetric detection, 307.
 McLeod, C. W. See Clarke, P. A.; Cook, I. G.; Johnson, D.
 Memon, M. H., and Worsfold, P. J. Analytical applications of microemulsions, 418.
 Millward, G. E. See Walton, A. P.
 Milne, K. T., Williams, M. H., Clarke, B. J., and Fell, A. F. Expert systems in luminescence analysis, 157.
 Milne, R. See Cape, J. N.
 Moffat, A. C. See Hurdley, T. G.
 Moody, G. J., Sanghera, G. S., and Thomas, J. D. R. Enzyme electrode systems for glucose analysis, 446.
 —, Slater, J. M., and Thomas, J. D. R. Some parameters of ion-sensitive field effect transistor (ISFET) sensors, 287.
 — See Gadzekpo, V. P. Y.; Hutchings, M. J.
 Mortensen, S., and Jensen, O. J. A new sodium selective electrode with membrane of ceramic Nasion, 148.
 Moss, M. S. Screening for doping agents in horse racing, 48.
 Mowthorpe, D. J. See Clarke, P. A.
 Mullen, W. H., Churchouse, S. J., Keedy, F. H., and Vadgama, P. M. Blood glucose determination using an enzyme electrode based on the quinoprotein, glucose dehydrogenase, 145.
 — See Churchouse, S. J.

N

- Nabi, A., and Worsfold, P. J. Indirect assays with immobilised firefly luciferase based on flow injection analysis, 415.
 Nickless, G. University of Bristol School of Chemistry, 177.
 Noctor, T. A. G., Clark, B. J., and Fell, A. F. Chiral separation of drug enantiomers by high-performance liquid chromatography, 441.
 Norman, P., and Ebdon, L. Computer-controlled optimisation of an inductively coupled plasma, 420.
 Notarianni, L. J. See Seymour, M. P.
 Nylander, C. I. See Burns, I. W.

O

- O'Haver, T. C. See Hall, D. H.
 O'Riordan, D. M. T., and Wallace, G. G. Chemically modified electrodes containing complexing groups for the determination of trace metals, 14.
 Osborne, B. G. Instrumental methods of flour analysis, 359.
 Ottaway, J. M. Obituary, 400.
 — Professor L'vov to visit Glasgow in October 1986. (Editorial), 317.
 — See Cardenas S., F. A.; Cook, S. W.; Egila, J. N.; Hall, D. H.; MacDonald, L. S.; McCabe, S.
 Ottaway, M. R. Thermal hazard evaluation by accelerating rate calorimetry, 116.

P

- Parr, R. A., Wilson, J. C., and Kelly, R. G. Microelectronic pH sensors, 291.
 Parry, S. J. Application of neutron activation to minerals analysis, 355.
 Pedley, D. G. See Eddowes, M. J.
 Perkins, J. R. See Berry, A. J.
 Phillips, A. J., Yarwood, R. J., and Collett, J. H. Thermal analysis of freeze-dried products, 394.
 Pierce, T. B. Application of robotic principles to laboratory automation, 318.
 Power, A., and Dadgar, D. HPLC determination of tricyclic antidepressants in human plasma, 416.
 Pugh, W. J. See Badwan, A. A.
 Pungor, E. Awarded third Robert Boyle Medal in Analytical Chemistry, 45, 362, 376.

R

- Ramsey, M. H. Second Ronald Belcher Memorial Lecturer, 45, 252.
 Read, P. *Analytical Abstracts*: in print and online, 140.
 Riviello, J. M. See Hojabri, H.
 Roberts, D. J., and Kahokolo, K. V. Flow injection carbon skeleton gas chromatography, 437.
 Roberts, J. A. See Johnson, D.
 Rolfe, P. See Martin, M. J.
 Roller, S. D. See Delaney, G. M.
 Rooney, R. C. All the bucks stop here! 91.
 Rose, N. D., and Webb, S. D. The validation of rubber vial closure steam sterilisation, 256.
 Rowland, A. P. Automated suppressed ion chromatography as applied to acid rain research, 308.
 Russell, M. J. See Cardenas S., F. A.
 Ruffy, J. E. Testing, certification and distribution of reference substances within the Wellcome foundation, 55.

S

- Sample, R. M. Tablet dissolution testing with a laboratory robot, 266.
 Sanghera, G. S. See Moody, G. J.
 Seaton, G. G. R., Marr, J. G. D., Clark, B. J., and Fell, A. F. Chemometric methods for the validation of peak homogeneity in HPLC, 424.
 Seymour, M. P., Jefferies, T. M., and Notarianni, L. J. An analysis of PCBs and organochlorine pesticides by capillary gas chromatography—a modern approach to PCB/OCP residue analysis of human milk, 260.
 Shand, C. A. See Adams, M. J.
 Shepherd, P. J. Pollution control distance learning, 381.
 Simpson, C. F. See Altria, K. D.

- Skinner, G. A. *See* Haines, P. J.
 Slater, J. M. *See* Moody, G. J.
 Smith, A. Studies in polymorphism and hydration, 388.
 Smith, D. B., and Starr, C. Near infrared reflectance analysis in plant breeding, 125.
 Smith, J. F. *See* Adnett, J. M.
 Smith, R. M. *See* Hurdley, T. G.
 Smyth, J. G. *See* Smyth, W. F.
 Smyth, M. R., and Egan, A. M. Electroanalysis of pharmaceuticals, 87.
 — *See* Hayes, P. J.
 Smyth, W. F., Ayling, C., and Smyth, J. G. Recent advances in the high-performance liquid chromatography analysis of veterinary antimicrobials, 84.
 Sparkes, S., and Ebdon, L. Slurry atomisation for agricultural samples by plasma emission spectrometry, 410.
 Squirrell, D. The new President, 249.
 Starr, C. *See* Smith, D. B.
 Stephen, W. I. Recipient of 1985 RSC award, 285.
 Stirling, J. L. *See* Delaney, G. M.
 Stone, D. C., and Tyson, J. F. Effect of flow cell on dispersion in flow injection analysis, 23.
 Stranz, G. Analyst competitions: a participating teacher's point of view, 334.
 Strutt, A. C. R. Two novel laboratory uses for the Apple II microcomputer, 153.
 Svehla, G. *See* Amberson, J. A.
 Swindall, W. J. Collaborative exercise on elemental analysers, 78.

T

- Takla, P. G. New member of Council, 377.
 Taylor, D. R. *See* Akporhonor, E. E.
 Taylor, M. G., and Edmonds, T. E. On-line voltammetric analysis of aniline, 28.
 Thomas, J. D. R. Alterations to SAC 86/3rd BNASS programme, 375.
 — Meeting points. (Editorial), 249.
 — Schools analyst competitions—a report on their nature and structure, 333.
 — *See* Gadzekpo, V. P. Y.; Hutchings, M. J.; Moody, G. J.
 Thomason, D. A. Use of ion-sensitive field effect transistors in the photographic industry, 293.
 Thorburn Burns, D. Recent trends and developments in techniques useful to the determination of drugs, 81.
 — Robert Boyle (1627–1691): A foundation stone of analytical chemistry in the British Isles. Part IV. Robert Boyle's determination of iron in Tunbridge water: the earliest quantitative colorimetric reaction. (Biography), 75.
 — Robert Boyle (1627–1691): a foundation stone of analytical chemistry in the British Isles. Part V. Hungarian mines, minerals and mineral waters. (Biography), 349.
 — *See* Adair, C. G.; Campbell, G. R.
 Thurston, C. F. *See* Delaney, G. M.
 Tölg, G. Plenary lecturer at SAC 86/3rd BNASS, 180.
 Townshend, A. Obituary of J. M. Ottawa (1939–1986), 409.
 — *See* Abbott, R. W.
 Tunnell, D. A. Quantitative and qualitative analysis using near infrared reflectance spectroscopy, 299.
 Turner, P. H. Fourier transform spectroscopy with an infrared microscope, 268.
 Tyson, J. F. "A"-level analysis, 335.
 — Awarded fourteenth SAC Silver Medal, 312.
 — Extended range calibrations by flow injection analysis, 304.
 — *See* Bysouth, S. R.; Stone, D. C.

U

- Ure, A. M. 1987 Theophilus Redwood lecturer, 45.

V

- Vadgama, P. M. *See* Churchouse, S. J.; Mullen, W. H.
 Volpe, P. L. O. *See* Beezer, A. E.

W

- Wagland, A. A. The use of microcomputer networks in pharmaceutical manufacture and analysis, 154.
 Wallace, G. G. *See* Heneghan, G.; Hojabri, H.; O'Riordan, D. M. T.
 Walsh, P. T. *See* Gentry, S. J.
 Walton, A. P., Ebdon, L., and Millward, G. E. The sources and significance of arsenic methylation in estuarine waters, 422.
 Webb, B. C. *See* Eddowes, M. J.
 Webb, S. D. *See* Rose, N. D.
 Weller, E. C. Analyst competitions—an industrial viewpoint, 334.
 Wells, D. E. New member of Council, 378.
 West, N. G. AQUA scheme for analytical quality assurance in occupational hygiene, 330.
 Westcott, S. G. *See* Larkins, L. A.
 Whitley, J. E., and Aggett, P. J. Neutron activation analysis of stable isotopic tracers for studies of mineral bioavailability, 363.
 Williams, M. H. *See* Milne, K. T.
 Wilson, J. C. *See* Parr, R. A.
 Wilson, R. *See* Adnett, J. M.
 Wolf, K., and Worsfold, P. J. Flow injection analysis as a sample handling technique for diode array spectroscopy, 365.
 Wood, R. Validation of analytical procedures used in the food sector, 329.
 Woodward, J. R. *See* Gibson, T. D.
 Woolfson, A. D. Pharmaceutical applications of polarographic analysis, 89.
 Worsfold, P. J. Autumn Meeting: enzymes and antibodies. (Editorial), 285.
 — *See* Cook, I. G.; Memon, M. H.; Nabi, A.; Wolf, K.
 Wright, D. J. Application of DSC to the study of food behaviour, 389.

X

- Xiao-quan, S. *See* Egila, J. N.

Y

- Yarwood, R. J. *See* Phillips, A. J.
 York, P., and Grant, D. J. W. Solid-state disorder in drugs and excipients, 396.

Z

- Zoro, J. A. Accelerant residues and the arson investigator, 276.

SAC 86

A

- Abbott, R. W., Townshend, A., and Gill, R.** Determination of morphine in body fluids by HPLC with post-column chemiluminescence detection, 200.
- Abdullahi, G. L.** See **Miller, J. N.**
- Abdulrahim, S., and Hassan, F. A.** Indirect polarographic microdetermination of hydrogen peroxide and some inorganic peroxides by using amplification reactions, 205.
- Adams, F.** See **Liu, X. D.**
- Adamson, B. W., and Price, B. J.** Developments in crystals and excitation systems for XRF analysis, 218.
- Adesida, D., Miller, R. M., Tye, C. T., and Vickery, I. P.** Applications of photoacoustic spectroscopy in plant science, 243.
- Adriaenssens, E.** See **Liu, X. D.**
- Afshan, A. S.** See **Sheikh, S. U.**
- Akinbolawa, J. A., and Miller, R. M.** Construction and characterisation of improved coated wire electrodes, 223.
- Al-Abachi, M. Q., and Sadullah, E.** Microdetermination of halides in organic compounds, 227.
- Al Attar, A., and Nickless, G.** The determination of selenium by GLC, 225.
- Albert, R.** See **Horwitz, W.**
- Aldabbagh, S. S.** See **Dybczynski, R.**
- Al-Daher, I. M.** Potentiometric titrations of metal ions in dimethyl sulphoxide (DMSO) with polyamine ligands, 221.
- Alder, J. F., and Leontakianakos, A.** Determination of water in natural gas by microwave rotational spectrometry, 197.
- , **Ashworth, D. C., Narayanaswamy, R., and Miller, R. M.** Fibre optic determination of ions of biological interest, 220.
- **Optical fibre sensors, 206.**
- Aleixo, L. M.** See **Godinho, O. E. S.**
- Al-Ghabsha, T. S., and Aziz, S. M. A.** Indirect spectrophotometric microdetermination of some carboxylic acids and unsaturated compounds in aqueous solution, 227.
- Al-Kindy, S. M. Z.** See **Miller, J. N.**
- Allus, M., and Nickless, G.** The determination of thallium by DPASV, 223.
- Al-Madfal, S. H.** See **Barbooti, M. M.**
- Almuallab, A. M., and Townshend, A.** Simultaneous flow injection spectrophotometric determination of vanadium and titanium, 240.
- Al-Sammerrai, D. A.** See **Barbooti, M. M.**
- Al-Sowdani, K. H., and Townshend, A.** Flow injection determination of europium after on-line reduction, 240.
- Al-Wahab, I. H.** See **Said, E. Z.**
- Al-Warthan, A. A., and Townshend, A.** Drug determination by chemiluminescence - FIA, 228.
- Aly, F. A.** See **Issa, R. M.**
- Aminuddin, M.** See **Miller, J. N.**
- Andersen, J. R.** Aluminium in man as determined by Zeeman-corrected atomic absorption spectrometry, 208.
- Appleton, J. M. H.** See **Bysouth, S. R.**
- Apte, S. C., and Gunn, A. M.** The rapid determination of trace metals in estuarine and coastal waters by semi-micro solvent extraction - graphite furnace atomic absorption spectrometry, 237.
- Ashraf, M.** See **Sheikh, S. U.**
- Ashworth, D. C.** See **Alder, J. F.**
- Assubaie, F. N., Frend, A. J., Gadzekpo, V. P. Y., Mason, D. M., Moody, G. J., Slater, J. M., and Thomas, J. D. R.** Ion-selective electrode studies using flow injection analysis units, 215.
- Asuero, A. G., and Marques, M. L.** Spectrophotometric determination of cobalt with dipyrityldiglyoxal mono-(2-pyridyl) hydrazone, 242.

Automatic Methods Group. The integrated laboratory: discussion, 202.

- Awad, N. A. N.** See **Jasim, F. H.**
- Ayodele, J. T., and Essiet, E. U.** Determination of trace metals in Cassia seed and oil, 230.
- Aziz, S. M. A.** See **Al-Ghabsha, T. S.**

B

- Baccan, N., Cadore, S., and de Andrade, J. C.** Sequential spectrophotometric determination of zinc and copper in fertilisers and plant materials using flow injection analysis, 240.
- Bale, S. J.** See **Smith, R. M.**
- Barber, M.** Fast atom bombardment, 205.
- Barbooti, M. M., Al-Madfal, S. H., and Al-Sammerrai, D. A.** Thermogravimetric and atomic absorption spectrometric characterisation of Quayarah heavy crude oils, 229.
- Bare, K. J., and Read, H.** The use of fast atom bombardment mass spectrometry to identify materials separated on high-performance thin-layer chromatographic plates, 205.
- Barnett, N. W., Spillane, D. E. M., and Taobl, A. A. H.** The analysis of some noise sources in inductively coupled plasma - optical emission spectroscopy, 234.
- See **Greenway, G. M.; Sanz-Medel, A.**
- Barnett, W. B.** See **Slavin, W.**
- Batho, A.** Reduction of interferences in graphite furnace atomic absorption spectrometry, 238.
- Beary, E. S., Brletic, K. A., and Paulsen, P. J.** Isotope dilution mass spectrometric assay of copper in copper ore reference materials, 205.
- Bermejo-Barrera, P., Pazos-Naveira, C., Vazquez-Gonzalez, J. F., and Bermejo-Martinez, F.** Determination of molybdenum with gallic acid and hydroxylamine, 241.
- , **Vazquez-Gonzalez, J. F., and Bermejo-Martinez, F.** Determination of molybdenum with toluene-3,4-dithiol by extraction into methyl isobutyl ketone, 241.
- , **Cocho De Juan, J. A., and Bermejo-Martinez, F.** Determination of vanadium in urine by electrothermal atomic absorption spectrometry, 236.
- See **Bermejo-Barrera, A.**
- Bermejo-Barrera, A., Guisasaola-Escudero, M., Bermejo-Barrera, P., and Bermejo-Martinez, F.** Simultaneous derivative spectrophotometric determination of iron(III) and bismuth(III) with EDTA, 241.
- Bermejo-Martinez, F.** See **Bermejo-Barrera, P.; Bermejo-Barrera, A.**
- Berridge, J. C., and Platt, R. V.** Applications of differentiation and re-integration to high-performance liquid chromatography, 224.
- **Chemometrics in pharmaceutical analysis (I), 203.**
- Berrow, M. L.** See **Mitchell, M. C.**
- Bersier, P. M.** Do polarography and voltammetry deserve wider recognition in official and recommended methods? 199.
- Besada, A.** See **Gawargious, Y. A.**
- Biernat, J. F.** See **Bochenska, M.**
- Black, I.** See **Burridge, J. C.**
- Blair, P. D.** See **Hutton, R. C.**
- Boampong, C., Brindle, I. D., and Ceccerelli, C.** Determination of hydride forming elements by d.c. plasma atomic emission spectrometry, 235.
- Bochenska, M., Biernat, J. F., and Dalley, N. K.** New ionophores for ion-selective electrodes, 222.

- Bonilla, M. See Rodriguez, L.
- Boorn, A., Gillson, G., Liversage, R., Quan, E., and Gale, B. Trace element analysis by ICP - MS, 218.
- Bosch Ojeda, C. See Bustos, A.
- Brainina, Kh. Z., Tchernysheva, A. V., and Stozhko, N. Yu. Electrodes modified *in situ* in inverse voltammetry, 204.
- Braithwaite, A. Education and Training Group discussion. The automatic unemployment of analysts: fact or fiction, 206.
- Brajter, K., and Slonawska, K. Determination of gold in platinum alloys by an AAS method, 231.
- Brčić, M., Kovačić, A., and Radic, N. J. Kinetic determination of aluminium and sulphate using ion-selective electrodes, 228.
- Brätter, P. See Frenzel, W.
- Brault, J. W. See Faires, L. M.
- Brindle, I. D. See Boampong, C.
- Bristow, A. F. Analytical control of genetically engineered proteins, 202.
- Brietic, K. A. See Beary, E. S.
- Brown, A. A., Morton, S. F., and Wassal, M. P. Applications of probe atomisation in graphite furnace atomic absorption spectrometry, 231.
- , and Dymott, T. C. Methods for improving sensitivity in flame atomic absorption spectrometry, 236.
- See Lee, M.
- Brown, R. See Nayler, R.
- Brown, R. H. Standardisation of methods: the role of the Health and Safety Executive Committee on Analytical Requirements (HSE/CAR), 226.
- Brown, R. K. See Johnston, G. F.
- Buckley, D. L., and Smyth, M. R. A spectral, polarographic and chromatographic investigation of the acid - base equilibria and metal complexation of oxytetracycline hydrochloride, 198.
- Burns, D. T., Harriott, M., McArdle, S., and Maxwell, T. H. Determinations of inorganic and butyltin in seawater over oyster beds around Strangford Lough, 216.
- Burridge, J. C., Russell, J. D., Hewitt, I. J., and Black, I. An infrared spectroscopic determination of submilligram amounts of aluminium as its 8-hydroxyquinolate, using iron as the internal standard, 242.
- Bustos, A., Sánchez Rojas, F., Bosch Ojeda, C., García de Torres, A., and Cano Pavón, J. M. The use of 1,5-bis(di-2-pyridylmethylene)thiocarbonohydrazide as extracting reagent for the determination of some transition metal ions by atomic absorption spectrophotometry, 231.
- Byssouth, S. R., and Tyson, J. F. Atomic absorption calibration using flow injection concentration gradient and dilution techniques, 232.
- , and — Current calibration practices for flame atomic absorption spectrometry, 231.
- , Appleton, J. M. H., and Tyson, J. F. Solution analysis with flow-through instrumentation without calibration, 194.
- C
- Cacho, J. See Nerin, C.
- Caddy, B. See Wanogho, S. O.
- Cadore, S. See Baccan, N.
- Calokerinos, A. C., Coukll, I., and Sarantonis, E. Analytical applications of chemiluminescence generated by reduction of cerium(IV), 204.
- , and Grekas, N. Molecular emission cavity analysis of organic sulphur compounds by electrolytic generation of hydrogen sulphide, 242.
- Camara, C. See Rodriguez, L.
- Campbell, R. S. See Scawen, M. D.
- Cano Pavón, J. M. See Bustos, A.; Ureña Pozo, M. E.
- Cantle, J. E. See Hutton, R. C.
- Carrick, G. R. See Slavin, W.
- Carr, R. N., and Miller, R. M. Multi-detector analytical systems, 244.
- Carroll, J., Corr, S., Littlejohn, D., Marshall, J., Quinn, A.-M., and Ottaway, J. M. Recent developments in automatic probe atomisation in ETA - AAS, 232.
- , Egila, J. N., Littlejohn, D., Marshall, J., Ottaway, J. M., and Stephen, S. S. Efficiency of microcomputer controlled background correction for ETA - continuum source AAS in comparison with Zeeman-effect and D₂-lamp background correction, 208.
- , Littlejohn, D., Ottaway, J. M., and Quinn, A.-M. Furnace atomic non-thermal excitation spectrometry—a novel electrothermal emission source, 208.
- Cave, M. R., and Haigh, D. G. A silicone rubber post-suppressor device for use in ion chromatography, 225.
- Ceccherelli, C. See Boampong, C.
- Chang, S. C. See Lin, E.-C.
- Chaplygina, N. I. See Grazulene, S. S.
- Chapman, A. H., and Samuel, A. A simplified procedure for the determination of total tin species in water, 239.
- Chavan, M. B. See Kuchekar, S. R.
- Chaytor, J. P. Analysis of amino acids by liquid chromatography—comparison of methodologies in practice, 224.
- Fatty acid profiles in triglycerides by high-performance liquid chromatography, 224.
- Separation of synthetic food dyes by high-performance liquid chromatography, 200.
- Chen, C. See Feng, D.
- Chen, M. F., Li, H. F., and Sun, S. X. An application of evaporation time dependence in spectrometric analysis, 236.
- Chen, U. J. See Lin, E.-C.
- Chen, X. See Feng, D.
- Cheung, Y. Y., Date, A. R., Shepherd, T. J., and Miller, M. F. The application of ETV - ICP - MS to fluid inclusion analysis, 234.
- See Miles, D. L.
- Clark, B. J. See Fell, A. F.
- Cocho De Juan, J. A. See Bermejo-Barrera, P.
- Coetzee, C. J., and Coetzee, C. J. Jr. A potentiometric study of the reaction between copper and chromate ions, 198.
- Coetzee, C. J. Jr. See Coetzee, C. J.
- Cole, E. R. See Seare, N. J.
- Cook, J. M. See Miles, D. L.
- Coombe, R. G., and Holcombe, Y. M. Screening for β -thalassaemia trait: HPLC determination of haemoglobin A₂ using dried blood spots, 224.
- Cope, M. J., and Davidson, I. E. The use of macroporous polymeric HPLC columns in pharmaceutical analysis, 223.
- Corr, S. See Carroll, J.
- Coukll, I. See Calokerinos, A. C.
- Creaser, C. S., and Stafford, A. Combined capillary column gas chromatography - molecular fluorescence spectroscopy, 199.
- Cresser, M. Pneumatic nebulisers—poor pumps and inferior sub-samplers? 217.
- Crews, J. M. See Ebdon, L.
- Crosby, N. T. Practical aspects of some EEC collaborative studies, 204.
- Crous, M. See Smith, K. A.
- Currell, B. R., and James, J. W. Analytical chemistry by open tech: ACOT, 193.
- Curtius, A. J., Welz, B., and Schlemmer, G. Lanthanum as a matrix modifier for graphite furnace atomic determination of phosphorus, 236.
- D
- Dadgar, D., and Dorgan, K. Investigations of the effect of various dispersing agents on the spectrophotometric determination of iron(III) with bromopyrogallol red, 241.

- Dalley, N. K. See Bochenka, M.
 Daniel, R. Ch. See Paul, J. L.
 Date, A. R. ICP - MS: the best thing in analytical chemistry since chopped light? 218.
 Date, A. R. See Cheung, Y. Y.; Miles, D. L.
 Davidson, I. E. See Cope, M. J.
 Davies, J. Low power laminar flow torch for inductively coupled plasma - atomic emission spectroscopy, 230.
 Dawson, J. B., Kersey, A. D., Hajizadeh-Saffar, M., Duffield, R. J., and Fisher, G. W. Measurement of magnetically induced optical rotation in atomic vapours, 208.
 de Andrade, J. C. See Baccan, N.
 De Biasi, A. See D'Innocenzo, F.
 de Galan, L. The Association of British Spectroscopists lecture. A physicist's appraisal of recent developments in atomic spectroscopy, 205.
 — See de Loos-Vollebregt, M. T. C.
 de Loos-Vollebregt, M. T. C., and de Galan, L. Totally pyrolytic graphite tubes in electrothermal atomisation - atomic absorption spectroscopy, 238.
 Delves, H. T. See Shuttler, I. L.
 De Marco, R., Kew, D., and Sullivan, J. V. Use of a hollow cathode emission source for determination of major constituents in metal samples, 214.
 Denton, M. B. Concepts for improved automated laboratory productivity, 196.
 de Oliveira Neto, G. See Godinho, O. E. S.
 de Pablos, F. See Pastor, E.
 de Souza, N. E. See Godinho, O. E. S.
 Diaz García, M. E., Martínez García, P. L., and Sanz-Medel, A. Recent advances in micelle-stabilised room temperature phosphorescence (MS-RTP) for the determination of organic and inorganic species, 197.
 — See Sanz-Medel, A.
 D'Innocenzo, F., Ottaviani, M., and De Biasi, A. Indirect determination of sulphate in rainwater by atomic absorption spectroscopy, 233.
 Dittrich, K. The use of lasers and other non-thermal excitation in atomic spectroscopy for trace analysis, 207.
 Doležal, J. See Sychra, V.
 Dorgan, K. See Dadgar, D.
 Dougherty, J. P. See Michel, R. G.
 Dreierbergen, R., van Oort, W., Zuman, P., Postma, S., Verboom, W., and Reinhoudt, D. Polarography of aziridinyl-quinones, alkylating anti-tumour agents, 199.
 Duffield, R. J. See Dawson, J. B.
 Dybczyński, R., and Aldabbagh, S. S. Selective separation of zinc from other elements on amphoteretic resin Retardion 11A8 and its use for the determination of zinc in biological materials by NAA, 217.
 Dymott, T. C. See Brown, A. A.

E

- Eaton, A. N. See Hutton, R. C.
 Ebdon, L., Evans, K. M., Hill, S. J., Munro, S., Walton, A. P., and Crews, J. M. Recent advances in trace metal speciation by coupled chromatography - atomic spectroscopy, 216.
 Ebdon, L., Foulkes, M. E., Norman, P., and Sparkes, S. T. Plasma emission spectroscopy using slurry atomisation—a dream come true? 217.
 — See Hill, S. J.; Norman, P.; Parry, H. G. M.; Sparkes, S. T.; Walton, A. P.
 Eddib, O., and Nickless, G. Discrimination between olive oils, 226.
 Egila, J. N. See Carroll, J.
 Ellaithy, M. See Oelschläger, H.
 El-Rayes, M. See Issa, R. M.
 Erndt, A. See Khalifa, M. A.
 Esslet, E. U. See Ayodele, J. T.
 Evans, K. M. See Ebdon, L.

F

- Faires, L. M., and Brault, J. W. Applications of high resolution Fourier transform spectrometry to studies of the inductively coupled plasma source, 208.
 Fan, J. D. See Liu, C.-Y.
 Fell, A. F., Clark, B. J., and Marr, J. G. D. Strategies for computer-aided photodiode array detection in HPLC, 203.
 Feng, D., Chen, C., and Chen, X. Study of ion-selective electrodes based on ion association. Preparation of a general anion selective electrode of PVC membrane, 221.
 Fernández, A. See Valcárcel, M.
 Fernández de la Campa, M. R. See García Alonso, J. I.
 Ferrett, J. See Jackson, C. J.
 Fielden, P. R. An electrochemical gas detector for hydrogen cyanide, 222.
 — A rapid, automatic gas chromatographic method for continual measurement of hydrogen cyanide and cyanogen in air, 201.
 Fielding, R. J., and Steers, E. B. M. Charge transfer excitation in glow discharges, 213.
 Filippini, O. See Taddia, M.
 Flusher, B. V. Chemometrics in pharmaceutical analysis (II), 203.
 Fisher, G. W. See Dawson, J. B.
 Floyd, A. J. See Seymour, M. P.
 Flynn, I. J., Miller, R. M., and Spillane, D. E. M. Some applications of photoacoustic spectroscopy in the analysis of the structure and properties of polymeric systems, 243.
 Fogg, A. G., and Ghawji, A. B. Towards control systems based on flow injection analysis with amperometric detection, 215.
 Ford, A. Control of allergens, 202.
 Formánek, Z. See Sychra, V.
 Foulkes, M. E. See Ebdon, L.
 Freiburg, C., and Reichert, W. XRF analysis of 10 mg of power: coal fly ash, 237.
 Friend, A. J. See Assubale, F. N.
 Frenzel, W., and Brätter, P. Computerised flow injection potentiometric stripping analysis for trace determinations of heavy metals, 222.
 —, and Brätter, P. Electrochemical stripping analysis in flow injection analysis, 215.

G

- Gadzekpo, V. P. Y. See Assubale, F. N.
 Galan, G. See Morales, M. T.
 Gale, B. See Boorn, A.
 Gallego, M. See Valcárcel, M.
 Gammelgaard, B. Determination of chromium by adsorption differential-pulse voltammetry, 222.
 García Alonso, J. I., Fernández de la Campa, M. R., and Sanz-Medel, A. Metal chelate fluorescence enhancement in micellar media: mechanisms of surfactant action, 197.
 García de Torres, A. See Bustos, A.; Ureña Pozo, M. E.
 Garnica, A. See Nerin, C.
 Gassim, A. E. H., Takla, P. G., and James, K. C. Ultraviolet spectrometry for the determination of benperidol by a difference procedure, and for the elucidation of its polymorphic structures, 220.
 Gawargious, Y. A., Tadors, N. B., Besada, A., and Ibrahim, L. F. Polarographic determination of antibiaryl organo-antimony compounds, 227.
 Gawienowski, A. M. See Tan, B.
 Gergely, A., Szász, G., and Soós, J. New method for the selective determination of corticosteroids by means of difference circular dichroism spectroscopy, 227.
 German, C. See Kozłowski, J.
 Ghawji, A. B. See Fogg, A. G.
 Gill, R. See Abbott, R. W.

- Gillson, G. See Boorn, A.
 Godinho, O. E. S., de Souza, N. E., Aleixo, L. M., de Oliveira Neto, G., and Ivaska, A. U. Determination of acids of wine by potentiometric titrimetry, 222.
 Goldberg, V. See Ratnaraj, N.
 Goldsmith, J. A. The automation of information handling, 201.
 Gomez-Ariza, J. L. See Morales, M. T.; Pastor, E.
 Gonchakov, A. S. See Grazhulene, S. S.
 Gordon, J. See Hutton, R. C.
 Grady, C. M. See Tan, B.
 Grasselli, J. G. A new era for applications of vibrational spectroscopy in industry, 197.
 Grazhulene, S. S., Gonchakov, A. S., Zolotaryova, N. I., Karandashev, V. K., Popandopulo, Y. I., and Chaplygina, N. I. Combination of impurity pre-concentration in compound semiconductors with different spectral methods of analysis, 243.
 Green, P. See Lee, M.
 Greenfield, S., and Thomsen, M. Non-resonance atomic fluorescence spectrometry with a dual plasma system, 230.
 —, and — Spectral interference in atomic spectrometry: the advantage of the atomic fluorescence technique, 200.
 Greenway, G. M., and Barnett, N. W. The production of vapour standards for the trace analysis of organometallic compounds in air using microwave plasma detection, 219.
 Grekas, N. See Calokerinos, A. C.
 Guisasaola-Escudero, M. See Bermejo-Barrera, A.
 Gunn, A. M. See Apte, S. C.
 Guthrie, A. J., and Narayanaswamy, R. Development of an optical fibre chemical sensor for cyanide ions, 239.
 Gwinda, M. See Khalifa, M. A.

H

- Haapakka, K., Kankare, J., and Kulmala, S. Enhanced peroxydisulphate induced electroluminescence at an oxide covered tantalum electrode, 223.
 — See Kankare, J.
 Hagan, W. P., Hurdley, L. A., Miller, J. N., Williams, A. T. R., and Winfield, S. A. Spectral searching and spectra-structure correlations in fluorescence spectrometry, 197.
 Haigh, D. G. See Cave, M. R.
 Hajizadeh-Saffar, M. See Dawson, J. B.
 Hall, G. E. M., and Park, C. J. The determination of tungsten in geological materials by inductively coupled mass spectrometry, 231.
 Hammond, P. M. See Scawen, M. D.
 Harnly, J. M. A method for identifying and quantifying background correction errors, 207.
 Harriott, M. See Thorburn Burns, D.
 Hassan, F. A. See Abdulrahman, S.
 Hassan, S. S. M. New liquid membrane electrodes for determination of perchlorate and periodate ions, 221.
 — New spectro- and electrochemical methods for determination of some anti-depressant drugs, 198.
 He, X. Selective determination of, and mathematical model for, the classification of mono- and polynuclear complexes, 241.
 Hewitt, I. J. See Burridge, J. C.
 Hickman, D. A. Analysis in forensic science using atomic spectroscopy, 219.
 Hietje, G. M., Miller, R. M., Pak, Y., and Wittig, E. P. Theoretical studies on the vaporisation of analyte particles in flames and plasmas, 237.
 Hill, S. J., Ebdon, L., and Jones, P. Interfacing HPLC - FAAS for trace metal speciation, 234.
 — See Ebdon, L.
 Hirose, Y. See Uetake, N.
 Hlavat, R. See Sychra, V.
 Holcombe, Y. M. See Coombe, R. G.
 Holthius, J. J. M., Zuman, P., Romkens, F. M. G. M., and van Oort, W. J. Electro-oxidation of some epipodophylotoxin derivatives, 227.
 Hopkinson, J., and Newbery, J. E. The quantitative determination of saccharides in aqueous solution by Fourier transform infrared spectrometry, 220.
 Horton, M. See Warren, P. L.
 Horwitz, W., and Albert, R. The standardisation of analytical methods, 204.
 Humber, J. See Warren, P. L.
 Hurdley, L. A. See Hagan, W. P.
 Hussain, M. A. See Karim, M. R. O.
 Hutton, R. C., Eaton, A. N., and Cantle, J. E. Analysis of organic solutions by ICP - MS, 232.
 —, Cantle, J. E., and Eaton, A. N. Applications of ICP - MS to the analysis of metals, 237.
 —, Cantle, J. E., Blair, P. D., and Gordon, J. Factors affecting isotope ratio measurements in ICP - MS, 217.
 —, Cantle, J. E., Eaton, A. N., and Blair, P. D. Fundamental performance criteria in ICP - MS, 205.

I

- Iba, H. See Uetake, N.
 Ibrahim, L. F. See Gawargious, Y. A.
 Issa, R. M., Aly, F. A., and El-Rayes, M. Indirect determination of the reducing sugars glucose and maltose by atomic absorption spectroscopy, 238.
 Ivaska, A. U. See Godinho, O. E. S.

J

- Jackson, C. J., and Ferrett, J. Calibration and operational protocols in automated ion chromatographic analysis, 201.
 Jackson, K. W., and Karwowska, R. The atomisation of trace metals from refractory matrices by slurry - electrothermal atomic absorption spectrometry, 217.
 Jackson, P. See Nayler, R.
 Jaffar, M. See Sheikh, S. U.
 James, J. W. See Currell, B. R.
 James, K. C. See Gassim, A. E. H.
 Jasim, F. H., and Awad, N. A. N. ETA - AAS investigations of Sc, Tb, Eu and Yb using different metal carbide coated pyrographite atomisers and matrix modifiers, 234.
 Jaya, S., Rao, T. P., and Rao, G. P. Galvanic stripping analysis of traces of cadmium in high purity zinc materials, 222.
 Jeffries, T. M. See Seymour, M. P.
 Jennings, V. J., and Morgan, J. E. The electrochemical behaviour of a pair of polarised carbon fibre micro-electrodes, 199.
 Johnston, G. F., and Brown, R. K. Laboratory robotics in chemical laboratories, 201.
 Jones, P. The development of photometric detectors for the HPLC determination of trace metals, 200.
 — See Hill, S. J.
 Juchli, K., and Price, B. J. New software for qualitative and semi-quantitative XRF analysis, 231.

K

- Kankare, J., and Haapakka, K. Cathodic electroluminescence at valve metal electrodes—a new analytical tool, 204.
 — See Haapakka, K.
 Karandashev, V. K. See Grazhulene, S. S.

- Karim, M. R. O., and Hussain, M. A. Trace water determination in binary propylene - water mixtures, using a proton isoconcentration technique, 229.
- Karwowska, R. See Jackson, K. W.
- Kasir, Z. M. See Nasser, T. A. K.
- Kersey, A. D. See Dawson, J. B.
- Keshavan, B., Nagaraja, P., and Sunderraj, S. A rapid method for spectrophotometric determination of selenium(IV) in soil and alloys, 242.
- Kew, D. See De Marco, R.
- Khalifa, M. A., Gwiazda, M., Erndt, A., and Nagraba, K. Gas chromatography (GC) and gas chromatography - mass spectrometry (GC - MS) as analytical tools for a new vinyl phosphate insecticide, methylbromfenvinphos, and its proposed metabolites, 199.
- Knox, J. H. Advances in columns and packings for high-performance liquid chromatography, 196.
- Koch, K. R. Polyurethane foams in selective separation and pre-concentration of the platinum group metals, 200.
- Kolihová, D. See Sychra, V.
- Kovačić, A. See Bralić, M.
- Kowalcuk, M. See Kowalski, W. J.
- Kowalska, E. T. See Kowalski, W. J.
- Kowalski, W. J., Kowalcuk, M., and Kowalska, E. T. Resolution of racemic lactones by complexation gas chromatography, 225.
- Kozłowski, J., German, C., and Zuman, P. Polarography of α -ketoacids and their esters, 206.
- Kuchekar, S. R., Savant, S. S., Madhale, R. D., and Chavan, M. B. Solvent extraction separation of bismuth(III) with *n*-octylaniline from hydrochloric acid media, 229.
- Kulmala, S. See Haapakka, K.

L

- Lachica, M. Analysis of powdered plant material without previous mineralisation by electrothermal atomic absorption spectrometry, 237.
- Lai, C. S., Moody, G. J., and Thomas, J. D. R. Piezoelectric quartz crystal detection of gases, 193.
- Lascelles, P. T. See Ratnaraj, N.
- Laserna, J. J. See Montes, R.
- Last, P. E., and Sample, R. M. Robot controlled dissolution testing: flexible laboratory automation, 201.
- , and —. Robot controlled tablet dissolution testing—successful laboratory automation, 193.
- Lazaro, F. See Valcárcel, M.
- Lee, M., Green, P., and Brown, A. A. Methods to overcome interferences in the determination of selenium in clinical materials, 207.
- Leontakianakos, A. See Alder, J. F.
- Lewin, K., Walsh, J. N., and Miles, D. L. Determination of sulphide in groundwaters by ICP - AES, 213.
- Li, F. See Zhao, Z.
- Li, H. F. See Chen, M. F.
- Li, P. Y. F., and Narayanaswamy, R. Oxygen-sensitive optical fibre transducer, 206.
- Liezers, M., Miller, R. M., and Thomas, K. E. Thermal wave imaging applied to ceramic thermal barrier coatings, 206.
- Lin, E.-C., Chang, S. C., Tang, C. P., and Chen, U. J. Resolution of dipeptides on L-proline bonded phase by HPLC, 223.
- Lipczynski, A. M. Reversed-phase high-performance liquid chromatographic behaviour of benzyl-D-penicillin and acid-base catalysed degradation products, 224.
- Littlejohn, D., Stephen, S. C., and Ottaway, J. M. Application of a slurry technique for the trace element analysis of foodstuffs by electrothermal atomic absorption spectrometry, 232.
- See Carroll, J.

- Liu, C.-Y., and Fan, J. D. Synthesis and characterisation of a thiohydroxamate chelating resin, 225.
- Liu, X. D., Verlinden, J., Adams, F., and Adriaenssens, E. Analysis of indium by spark source mass spectrometry, 244.
- Liu, Y. See Zhao, Z.
- Liversage, R. See Boorn, A.
- Luque de Castro, M. S. See Valcárcel, M.
- L'vov, B. V. New advances in furnace atomic absorption spectrometry, 196.

M

- Madhale, R. D. See Kuchekar, S. R.
- Maack, M. See Touabet, A.
- Maklali, B. Y. See Touabet, A.
- Malati, M. A. Radiochemistry in chemical education, 229.
- Some titrimetric applications of Mn(III) salt solutions, 229.
- Mandjukov, P. B. See Tsalev, D. L.
- Manning, D. C. See Slavin, W.
- Marais, P. J. J. G., and Orren, M. J. Simplex optimisation and evaluation of an argon cooled inductively coupled plasma for the analysis of lubricating oils, 235.
- Marin, M. A. See Perez-Bendito, D.
- Marques, M. L. See Asuero, A. G.
- Marr, J. G. D. See Fell, A. F.
- Marshall, G. B. Diffusion denuder tubes for the determination of trace concentrations of atmospheric gases, 230.
- Marshall, J. See Carroll, J.
- Martínez, P. See Valcárcel, M.
- Martínez García, P. L. See Díaz García, M. E.
- Martins, M. M. C. See Mendes-Bezerra, A. E.
- Martin-Smith, M. See Smith, R. M.
- Mason, D. M. See Assubale, F. N.
- Maxwell, T. H. See Thorburn Burns, D.
- Mayers, A. R., and Taylor, C. G. Determination of ascorbic acid by thermometric titrimetry with cerium(IV), 206.
- McArdle, S. See Thorburn Burns, D.
- Mendes-Bezerra, A. E., Paiva, M. E. D., and Martins, M. M. C. An atomic-absorption study of strontium, 233.
- , Mota, R. G. S., and Martins, M. M. C. Effects of some ions on lithium atomic absorption, 232.
- Michel, R. G., Dougherty, J. P., Preli, F. R., and Seltzer, M. D. Progress in laser excited atomic fluorescence spectrometry, 238.
- Miles, D. L., Cook, J. M., Cheung, Y. Y., and Date, A. R. A comparison between ICP - MS and ICP - OES for the analysis of groundwaters, 218.
- See Lewin, K.
- Miller, J. N., and Abdullahi, G. L. New flow injection analysis studies of interacting systems, 215.
- , Al-Kindy, S. M. Z., and Aminuddin, M. New fluorescent labels for biochemical analysis, 198.
- See Hagan, W. P.; Nguta, C. M.; Seare, N. J.
- Miller, M. F. See Cheung, Y. Y.
- Miller, R. M., Oduzo, C. F., and Thomas, K. E. Cybernetic voltammetry, 226.
- , Surtees, G. R., and Tye, C. T. The study of diffusion processes by impulse response photoacoustic spectroscopy, 243.
- See Adesida, D.; Akinbolawa, J. A.; Alder, J. F.; Carr, R. N.; Flynn, I. J.; Hieftje, G. M.; Liezers, M.
- Millward, G. E. See Walton, A. P.
- Mitchell, M. C., Shand, C. A., and Berrow, M. L. The direct graphite furnace atomic absorption determination of acetic acid extracts of soils, 230.
- See Shand, C. A.
- Montana, M. T. See Morales, M. T.
- Montes, R., and Laserna, J. J. A reaction rate method for the determination of nitrite in polluted waters, 228.

- Moody, G. J., Slater, J. M., and Thomas, J. D. R. Analysis with ISFETs, 193.
 — See Asubale, F. N.; Lai, C. S.; Sanghera, G. S.
 Morales, M. T., Montana, M. T., Galan, G., and Gomez-Ariza, J. L. Spectrophotometric determination of zinc with 1-[di-(2-pyridyl)methylidene]-(5-salicylidene)-thiocarbohydrazide, 241.
 Morgan, J. E. See Jennings, V. J.
 Morton, S. F. See Brown, A. A.
 Mota, R. G. S. See Mendes-Bezerra, A. E.
 Munro, S. See Ebdon, L.
 Murilla, G. A. See Smith, R. M.

N

- Nabi, A. See Worsfold, P. J.
 Nagaraja, P. See Keshavan, B.
 Nagraba, K. See Khalifa, M. A.
 Nagy, K. All solid-state glass electrodes and their application in differential potentiometric sensors, 199.
 Narayanaswamy, R., and Sevilla, F. An optical fibre sensor for sulphide ions, 239.
 — See Alder, J. F.; Guthrie, A. J.; Li, P. Y. F.; Russell, D. A.
 Nasser, T. A. K., and Kassir, Z. M. Recent cathodoluminescence studies of cerium and indium by a rod technique, 242.
 Nayler, R., Brown, R., Jackson, P., and Sanderson, N. E. The analysis of trace elements in metals by high resolution flow discharge mass spectrometry, 232.
 Nerin, C., Garnica, A., and Cacho, J. Formation and extraction of ion pairs and indirect determination by atomic absorption spectrometry, 228.
 —, Cacho, J., and Urdanoz, A. Study of non-aqueous media as vehicles for generation and subsequent determination of hydride by AAS, 237.
 Newbery, J. E. See Hopkinson, J.
 Nguta, C. M., and Miller, J. N. Variable angle fluorescence scanning of polynuclear aromatic hydrocarbons, 241.
 Nickless, G. See Al Attar, A.; Allus, M.; Eddib, O.
 Nimn, H. K. See Said, E. Z.
 Norman, P., and Ebdon, L. Analysis of zeolites and other minerals by ICP - OES using slurry atomisation, 217.
 — See Ebdon, L.
 Notarianni, L. J. See Seymour, M. P.

O

- Oduzo, C. F. See Miller, R. M.
 Oelschlager, H., and Ellaihy, M. The polarographic behaviour of uldazepam, 203.
 Oliver, G. J. X-ray fluorescence analysis in the ceramic and allied industries, 218.
 Orren, M. J. See Marais, P. J. J. G.
 Ortner, H. See Sychra, V.
 Ottaviani, M. See D'Innocenzio, F.
 Ottaway, J. M. See Carroll, J.; Littlejohn, D.
 Outred, M. See Surrey, E.

P

- Paiva, M. E. D. See Mendes-Bezerra, A. E.
 Pak, Y. See Hlejtje, G. M.
 Pan, H. See Zhao, Z.
 Park, C. J. See Hall, G. E. M.
 Parry, H. G. M., and Ebdon, L. Direct analysis of powdered whole coal by ETA - AAS without sample dissolution, 233.

- Pastor, E., de Pablos, F., and Gómez Ariza, J. L. G. Determination of aluminium and indium at nanogram levels with N,N'-oxalylbis(2,4-dihydroxybenzaldehyde), 242.
 Paul, J. L., and Daniel, R. Ch. Analysis of cobalt and nickel by polarography, 223.
 Paulsen, P. J. See Beary, E. S.
 Pazos-Naveira, C. See Bermejo-Barrera, P.
 Peinado, J. See Perez-Bendito, D.
 Perez-Bendito, D., Toribio, F., and Peinado, J. A new sensitive kinetic method for hydroperoxide determination in oil samples, 228.
 —, Silva, M., and Marín, M. A. Kinetic - photometric determination of indium - gallium mixtures, 228.
 Perpall, H. J. See Uden, P. C.
 Perry, S. G., and Wright, E. R. Role of robotics in laboratory automation, 201.
 Platt, R. V. See Berridge, J. C.
 Popandopulo, Y. I. See Grazhulene, S. S.
 Porter, D. G. Robotics in the laboratory, 203.
 Postma, S. See Dreiberger, R.
 Preli, F. R. See Michel, R. G.
 Price, B. J. See Adamson, B. W.; Juchli, K.
 Price, C. P. Performance of consumer diagnostic kits, 202.
 — See Scawen, M. D.
 Püschel, P. See Sychra, V.

Q

- Qu, Y., and Wang, J. Analysis of the chemical forms of iridium—determination of $[\text{Ir}(\text{NO}_2)_6]^{3-}$, $[\text{Ir}(\text{NO}_2)\text{Cl}_5]^{3-}$ and $[\text{Ir}(\text{NO})\text{Cl}_5]^-$, 243.
 Quan, E. See Boorn, A.
 Quinn, A.-M. See Carroll, J.

R

- Radić, N. J. See Bralić, M.
 Rajković, M. B. See Vučurović, B. D.
 Ramsey, J. R. See Scawen, M. D.
 Ramsey, M. H., and Thompson, M. High-accuracy analysis by inductively coupled plasma - atomic emission spectrometry (ICP - AES) using the prism correction for noise, drift and matrix effects, 213.
 —, and Thompson, M. Simultaneous correction of variable matrix effects and spectral interference in inductively coupled plasma - atomic emission spectrometry (ICP - AES) by interactive matrix matching (IMM), 237.
 Rao, G. P. See Jaya, S.
 Ratnaraj, N., Goldberg, V., and Lascelles, P. T. New methods for the analysis of tricyclic antidepressant drugs, 220.
 Read, H. See Bare, K. J.
 Reichert, W. See Freiburg, C.
 Reinhoudt, D. See Dribergen, R.
 Rios, A. See Valcárcel, M.
 Ripley, B. D., and Thompson, M. Regression techniques for the detection of bias, 204.
 Rodriguez, L., Bonilla, M., and Camara, C. Determination of lead in biological materials by sensitised plumbane generation using the atomic absorption technique, 234.
 Rodriguez Roza, R. See Sanz-Medel, A.
 Romkens, F. M. G. M. See Holthius, J. J. M.
 Russell, D. A., and Narayanaswamy, R. An optical fibre sensor for the detection of fluoride ions, 240.
 Russell, J. D. See Burridge, J. C.

S

- Saduliah, E. See Al-Abachi, M. Q.

- Saeed, K. Direct electrothermal atomic absorption spectrometric determination of selenium in biological fluids. Part II. Whole blood and serum, 235.
- Said, E. Z., Al-Wahab, I. H., and Nima, H. K. Infrared spectrophotometric determination of the alkalinity of over-based petroleum sulphonates, 221.
- Sample, R. M. *See* Last, P. E.
- Samuel, A. *See* Chapman, A. H.
- Samuel, A. J. *See* Seare, N. J.
- Sánchez Rojas, F. *See* Bustos, A.
- Sanderson, N. E. *See* Nayler, R.
- Sanghera, G. S., Moody, G. J., and Thomas, J. D. R. Oxidase enzyme electrodes in flow injection analysis, 193.
- Sanz-Medel, A., Rodríguez Roza, R., Díaz García, M. E., Ujalini, A. L. R., and Barnett, N. W. New instrumental approaches to the problem of the determination of aluminium at the p.p.b. level in biological fluids, 219.
- *See* Díaz García, M. E.; García Alonso, J. I.
- Sarantonis, E. *See* Calokerinos, A. C.
- Savant, S. S. *See* Kuchekar, S. R.
- Sawyer, C. C., and Taylor, C. G. Separation and identification of sulphate and phosphate by radiochromatography: a teaching experiment, 193.
- Scawen, M. D., Hammond, P. M., Ramsey, J. R., Price, C. P., and Campbell, R. S. Microbial enzymes as diagnostic reagents, 202.
- Schlemmer, G., and Welz, B. Factors affecting the accuracy of trace element determination in biological materials using graphite furnace atomic absorption spectrometry, 236.
- , and Weltz, B. The use of alternative gases in graphite furnace atomic absorption spectrometry, 207.
- *See* Curtius, A. J.; Welz, B.
- Schubert-Jacobs, M. *See* Welz, B.
- Seare, N. J., Miller, J. N., Cole, E. R., Samuel, A. J., and Woodbridge, A. P. Fluorescence immunoassay in pesticide analysis, 220.
- Seltzer, M. D. *See* Michel, R. G.
- Sevilla, F. *See* Narayanaswamy, R.
- Seymour, M. P., Jeffries, T. M., Floyd, A. J., and Notarianni, L. J. Routine analysis of organochlorine pesticides and PCBs in human milk capillary GC - MS, 216.
- Shand, C. A., Ure, A. M., and Mitchell, M. C. Graphite furnace atomic absorption determination of selenium in plant materials following combustion in a stream of oxygen, 207.
- *See* Mitchell, M. C.
- Sheikh, S. U., Afshan, A. S., Jaffar, M., and Ashraf, M. Trace metal analysis using atomic absorption and polarography, 231.
- Shepherd, T. J. *See* Cheung, Y. Y.
- Shu, B.-C., and Zheng, R. Y. Polarographic hydrogen catalytic waves of rhenium and tellurium and their application, 229.
- Shuttler, I. L., and Delves, H. T. Between-batch variability of thermal characteristics of commercially available L'vov platform graphite tube atomisers and analytical accuracy in ETA - AAS, 239.
- Silva, M. *See* Perez-Bendito, D.
- Slater, J. M. *See* Assubale, F. N.; Moody, G. J.
- Slavin, W., Carnrick, G. R., Manning, D. C., and Barnett, W. B. The feasibility of absolute furnace AAS analyses, 238.
- Stonawska, K. *See* Brajter, K.
- Smith, K. A., Wood, S., and Crous, M. A rapid method for the determination of propranolol in plasma, 227.
- Smith, R. M., Bale, S. J., Westcott, S. G., and Martin-Smith, M. Retention modification in HPLC using metal ions, 200.
- , and Murilla, G. A. The application of retention indices to the identification of the thiazide diuretic drugs, 226.
- Smyth, M. R. *See* Buckley, D. L.
- Snook, R. D. Torch configuration and designs for inductively coupled plasma atomic emission spectrometry, 213.
- Soós, J. *See* Gergely, A.
- Sparkes, S. T., and Ebdon, L. Agricultural sample analysis by slurry atomisation - plasma emission spectroscopy, 234.
- , and Ebdon, L. Slurry atomisation by DCP—some theoretical considerations, 234.
- *See* Ebdon, L.
- Spillane, D. E. M. *See* Barnett, N. W.; Flynn, I. J.
- Stafford, A. *See* Creaser, C. S.
- Steers, E. B. M., and Zendejnam, A. Electrical and spectral characteristics of the positive column of a low pressure discharge in inert gases, 233.
- *See* Fielding, R. J.
- Stephen, S. C. *See* Carroll, J.; Littlejohn, D.
- Stevens, P. J. Quality control of steroid production by chromatography, 200.
- Stone, D. C., and Tyson, J. F. Models for dispersion in flow injection analysis, 214.
- Stozhko, N. Yu. *See* Brainina, Kh. Z.
- Stratis, J. A. *See* Tsalev, D. L.
- Sullivan, J. V. *See* De Marco, R.
- Sun, S. X. *See* Chen, M. F.
- Sunderraj, S. *See* Keshavan, B.
- Surrey, E., and Outred, M. Fundamental physical properties of microwave excited light sources, 214.
- Surtees, G. R. *See* Miller, R. M.
- Sychra, V., Kolihová, D., Hlaváč, R., Doležal, J., Püschel, P., Formanek, Z., and Ortner, H., Advances in metal-based electrothermal atomisers, 206.
- Szász, G. *See* Gergely, A.

T

- Taddia, M., and Filippini, O. Determination of magnesium and zinc in gallium arsenide by electrothermal AAS using the L'vov platform, 235.
- Tadros, N. B. *See* Gawargious, Y. A.
- Takla, P. G. *See* Gassim, A. E. H.
- Tan, B. Acid precipitation effect on anion transport of the Atkins reservoir, Massachusetts, 216.
- , Grady, C. M., and Gawienowski, A. M. Hydrocarbon carotenoid profiles of palm oil processed fractions, 244.
- Tang, C. P. *See* Lin, E.-C.
- Taobi, A. A. H. *See* Barnett, N. W.
- Taylor, C. G. *See* Mayers, A. R.; Sawyer, C. C.
- Tchernysheva, A. V. *See* Brainina, Kh. Z.
- Thomas, J. D. R. Sample constituent effects on ion-selective electrode behaviour, 198.
- *See* Assubale, F. N.; Lai, C. S.; Moody, G. J.; Sanghera, G. S.
- Thomas, K. E. *See* Liezers, M.; Miller, R. M.
- Thompson, M. The receptor - transducer interface in biosensor technology, 219.
- Thompson, M. *See* Ramsey, M. H.; Ripley, B. D.
- Thompson, R. E. US EPA Certified Reference Standards and quality assurance materials for the analysis of pesticides and industrial chemicals, 226.
- Thomsen, M. *See* Greenfield, S.
- Thorburn Burns, D., and Tungkananuruk, N. The spectrophotometric determination of cobalt after extraction of tetramethylene bis(triphenylphosphonium)tetrathiocyanatocobaltate(III) using microcrystalline benzophenone, 243.
- Thorne, A. Fourier transform atomic spectroscopy, 208.
- Timmins, K. J. Low volatile elements in the MIP, 235.
- Tölg, G. Extreme trace analysis of the elements—the state of the art today and tomorrow, 196.
- Toribio, F. *See* Perez-Bendito, D.
- Touabet, A., Maack, M., and Maklati, B. Y. Determination of dead time and retention data in gas - liquid chromatography, 225.

Townsend, A. Flow injection analysis: columns, cycles and networks, 214.

— See **Abbot, R. W.**; **Almualbed, A., M.**; **Al-Sowdani, K. H.**; **Al-Warthan, A. A.**

Tsilev, D. L., **Mandjukov, P. B.**, and **Stratis, J. A.** Electrothermal atomic absorption spectrometric determination of inorganic and methylated arsenic after pre-concentration by hydride generation and trapping hydrides in a cerium(IV) - iodide absorbing solution, 235.

Tungkananuruk, N. See **Thorburn Burns, D.**

Tye, C. T. See **Adesida, D.**; **Miller, R. M.**

Tyler, G. A. Determination of low level aluminium in biological fluids by vacuum ultraviolet ICP, 239.

Tyson, J. F. Analytical information from doublet peaks in FIA? 214.

— See **Bysouth, S. R.**; **Stone, D. C.**

U

Uden, P. C., **Perpall, H. J.**, and **Yoo, Y. J.** Empirical formula determination in pyrolysis - gas chromatography by plasma atomic emission spectrometry, 219.

Uetake, N., **Iba, H.**, and **Hirose, Y.** Quantitative analysis of degradation products in tributyl phosphate using ^{31}P FT - NMR spectrometry, 220.

Ujaimi, A. L. R. See **Sanz-Medel, A.**

Urdanoz, A. See **Nerin, C.**

Ure, A. M. See **Shand, C. A.**

Urcía Pozo, M. E., **García de Torres, A.**, and **Cano Pavon, J. M.** Simultaneous determination of zinc and gallium in biological samples by use of synchronous scanning spectrofluorimetry, 242.

V

Valcárcel, M., **Gallego, M.**, and **Martínez, P.** Indirect atomic absorption methods based on continuous precipitation in flow injection analysis, 233.

—, **Luque de Castro, M. D.**, and **Fernandez, A.** Formation of two reaction zones in flow injection analysis: theoretical aspects and applications, 214.

—, **Luque de Castro, M. D.**, and **Lazaro, F.** Simultaneous determination of organic isomer mixtures by flow injection analysis with a diode array photometer, 240.

—, **Luque de Castro, M. D.**, and **Rios, A.** Simultaneous fluorimetric determination of ammonia and hydrazine based on the formation of pH gradients in a flow injection system, 240.

van Oort, W. J. See **Dreibergen, R.**; **Holthius, J. J. M.**

Vazquez-Gonzalez, J. F. See **Bermejo-Barrera, P.**

Verboom, W. See **Dreibergen, R.**

Verlinden, J. See **Liu, X. D.**

Vickery, I. P. See **Adesida, D.**

Vučurović, B. D., and **Rajković, M. B.** A deposit ion-selective wire electrode for the determination of copper(II), 222.

W

Walsh, J. N. See **Lewin, K.**

Walton, A. P., **Ebdon, L.**, and **Millward, G. E.** Metal methylation and its significance in estuarine waters, 216.

— See **Ebdon, L.**

Walton, S. J. ICP - AES—the minitorch in practice, 238.

Wang, J. See **Qu, Y.**

Wanogho, S. O., and **Caddy, B.** Environmental toxicology—a forensic approach, 216.

Warren, P. L., **Humber, J.**, and **Horton, M.** The role of energy dispersive XRF in process analysis, 218.

Wassal, M. P. See **Brown, A. A.**

Welz, B., and **Schlemmer, G.** Total pyrolytic graphite for electrothermal atomic absorption spectrometry—facts and fiction, 236.

—, and **Schubert-Jacobs, M.** Use of the trapping technique to investigate atomisation mechanisms in hydride-generation atomic absorption spectrometry, 235.

— See **Curtius, A. J.**; **Schlemmer, G.**

Werner, G. Increase of selectivity and sensitivity of catalytic methods by irradiation, 204.

West, N. G. Analytical quality control in occupational hygiene—the AQUA scheme 198.

West, T. S. Problems posed by analysis for bioessential trace elements, 215.

Westcott, S. G. See **Smith, R. M.**

Williams, A. T. R. See **Hagan, W. P.**

Winfield, S. A. See **Hagan, W. P.**

Wittig, E. P. See **Hieftje, G. M.**

Wood, S. See **Smith, K. A.**

Woodbridge, A. P. See **Seare, N. J.**

Worsfold, P. J., and **Nabi, A.** Bioluminescence reactions in flow injection analysis, 215.

Wright, E. R. Use of a robot in a petroleum laboratory, 226.

— See **Perry, S. G.**

X

Xie, S.-L. Using an ion-selective electrode for accurate measurements of micro-amounts of fluoride in water quality standard samples, 221.

Y

Yang, Y. See **Zhao, Z.**

Yoo, Y. J. See **Uden, P. C.**

Z

Zendehnam, A. See **Steers, E. B. M.**

Zevin, I., and **Zevin, L.** Phase (mineralogical) analysis of low-mass (microgram range) samples by X-ray diffraction, 219.

Zevin, L. See **Zevin, I.**

Zhao, Z., **Li, F.**, **Liu, Y.**, **Pan, H.**, and **Yang, Y.** High temperature hydrogen reduction - gas chromatographic method with dual-flame photometry for the determination of trace phosphorus in trichlorosilane, 225.

Zheng, R. Y. See **Shu, B.-C.**

Zolotaryova, N. I. See **Grazhulene, S. S.**

Zuman, P. See **Dreibergen, R.**; **Holthius, J. J. M.**; **Kozłowski, J.**

SUBJECT INDEX

A

- Accelerant residues and the arson investigator.** Zoro, 276.
- Accelerating rate calorimetry:** Thermal hazard evaluation by —, Ottaway, 116.
- Accident investigation:** Did it fall or was it pushed? Gilbert, 273.
- Acid rain:** Automated suppressed ion chromatography as applied to — research. Rowland, 308.
- Activated alumina:** Use of — as a column packing material for adsorption of oxyanions in flow injection analysis with ICP - AES detection. Cook, McLeod and Worsfold, 5.
- Adaptive tracker:** Two novel laboratory uses for the Apple II microcomputer. Strutt, 153.
- Air:** Multi-sensor systems in hazard monitoring. Bott and Jones, 61.
- Agricultural samples:** Slurry atomisation for — by plasma emission spectrometry. Sparkes and Ebdon, 410.
- Alcohol oxidase:** Automated determination of ethanol using the enzyme —. Gibson and Woodward, 360.
- Amperometric amalgam detectors:** Reductive determination of metal ions by flow injection analysis using —. Eadington and Dalziel, 434.
- Amperometry:** Indirect amperometric detection of metal ions following ion chromatographic separations. Hojabri, Lavin, Wallace and Riviello, 26.
- Analytical Abstracts:** in print and online. Read, 140.
- Analytical Chemistry Trust Fund,** 46, 379.
- Methods of analysis used for investigating whisky complaints. Cochrane, 357.
- Analytical Division:** 14th A.G.M., 137.
- group membership: 403.
- Atomic Spectroscopy Group. 21st A.G.M., 74.
- Automatic Methods Group. 20th A.G.M., 138.
- 1st Ronald Belcher Memorial lecture given by S. A. Johnson, 1.
- 2nd Ronald Belcher Memorial lecturer M. H. Ramsey, 45, 252.
- Biennial dinner and presentation of awards, 139.
- Biological Methods Group. 41st A.G.M., 74.
- 3rd Robert Boyle Medal awarded to E. Pungor, 45, 362, 376.
- Chromatography and Electrophoresis Group. 21st A.G.M., 74.
- Distinguished Service Award conferred on M. A. Crook, 45, 139, 141.
- Distinguished Service Award conferred on C. J. Keatch, 45, 139, 141.
- Electroanalytical Group. 16th A.G.M., 74.
- Joint Pharmaceutical Analysis Group. 16th A.G.M., 250.
- Meeting points. (Editorial), 249.
- Microchemical Methods Group. 42nd A.G.M., 138.
- Midlands Region. 31st A.G.M., 138.
- New members of Council, 377.
- New President, Mr. D. C. M. Squirrel, 249.
- North East Region. 20th A.G.M., 74.
- Northern Ireland Region. 5th A.G.M., 138.
- North West Region. 61st A.G.M., 138.
- Particle Size Analysis Group. 20th A.G.M., 74.
- Radiochemical Methods Group. 19th A.G.M., 138.
- Schools lecturer 1986/7—L. C. Ebdon, 45.
- Scottish Region. 51st A.G.M., 74.
- Special Techniques Group. 41st A.G.M., 138.
- 16th Theophilus Redwood lecturer A. M. Ure, 45.
- Thermal Methods Group. 21st A.G.M., 74.
- Western Region. 31st A.G.M., 138.
- Aniline:** On-line voltammetric analysis of —. Taylor and Edmonds, 28.

- Antibodies:** Autumn meeting: enzymes and antibodies. Worsfold. (Editorial), 285.
- Antimony:** Novel method for the determination of arsenic, — and selenium in single-cell protein (Pruteen). McCabe and Ottaway, 16.
- APL programming language:** APL—the ideal programming language for HPLC optimisation? Frost, 265.
- AQUA scheme** for analytical quality assurance in occupational hygiene. West, 330.
- Arsenic:** Novel method for the determination of —, antimony and selenium in single-cell protein (Pruteen). McCabe and Ottaway, 16.
- The sources and significance of — methylation in estuarine waters. Walton, Ebdon and Millward, 422.
- Arson investigation:** Accelerant residues and the arson investigator. Zoro, 276.
- Atomic absorption spectrometry:** See Spectrometry, atomic absorption.
- Atomic emission spectrometry:** See Spectrometry, atomic emission.
- Atomic-source diagnostics:** Models, measurements, methods and machines in analytical spectrometry. Hieftje, 382.
- Auto-correlation spectroscopy:** See Spectroscopy, auto-correlation.
- Automated ethanol determination:** Automated determination of ethanol using the enzyme alcohol oxidase. Gibson and Woodward, 360.
- Automated ion exchange:** Automatic detergent analysis. MacDonald, Cooksey, Ottaway and Campbell, 448.
- Automatic background correction:** A software-controlled system for — in inductively coupled plasma - optical emission spectrometry. Hall, Littlejohn, Ottaway and O'Haver, 18.
- Azone:** Differential scanning calorimetry of human stratum corneum: effects of penetration enhancers — and dimethyl sulphoxide. Goodman and Barry, 397.

B

- Bacteria:** Electron transduction from enzymes and —. Delaney, Bennetto, Mason, Roller, Stirling and Thurston, 143.
- Ronald Belcher Memorial Lecture:** Delivered by M. H. Ramsey, 45, 252.
- Bile acid conjugates:** Modified sample preparation and chromatography for the separation of human —. Campbell, Harriott and Thorburn Burns, 33.
- Biological response:** Microcalorimetric bioassay and the development of a group additivity scheme for —. Beezer, Volpe, Gooch and Hunter, 399.
- Bioluminescence:** Indirect assays with immobilised firefly luciferase based on flow injection analysis. Nabi and Worsfold, 415.
- Biosensors** for the food industry. Kress-Rogers and D'Costa, 149.
- Blood:** See also Physiological fluids.
- HPLC determination of tricyclic antidepressants in human plasma. Power and Dadgar, 416.
- Potentiometric methods of *in vivo* analysis. Martin and Rolfe, 303.
- Preliminary studies towards an assay for circulating vitamin B₆ levels in plasma using high-performance liquid chromatography with electrochemical detection. Hart and Hayler, 439.
- Blood glucose** determination using an enzyme electrode based on the quinoprotein, glucose dehydrogenase. Mullen, Churchouse, Keedy and Vadgama, 145.

- Robert Boyle Medal:** Awarded to E. Pungor, 45, 362, 376.
- Boyle, R.:** Robert Boyle (1627-1691): a foundation stone of analytical chemistry in the British Isles. Part IV. Biography. Thorburn Burns, 75.
- Robert Boyle (1627-1691):** a foundation stone of analytical chemistry in the British Isles. Part V. Biography. Thorburn Burns, 349.
- Brewing:** Application of near infrared analysis in —. Halsey, 126.
- Bristol:** The city of —, 176.
- University of — school of chemistry.** Nickless, 177.
- British Standards:** 47, 105, 343.

C

- Calibrations:** Extended range — by flow injection analysis. Tyson, 304.
- On-line sample and standard manipulation for flame atomic absorption spectrometry.** Bysouth and Tyson, 412.
- Calorimetry:** Calorimetric methods of gas detection. Gentry and Walsh, 59.
- Candoluminescence spectrometry:** See Spectrometry, candoluminescence.
- Capacity factors:** Study of the HPLC separation of some local anaesthetics. Hurdley, Smith, Gill and Moffat, 161.
- Carbon skeleton gas chromatography:** Flow injection —. Roberts and Kahokola, 437.
- Catalysis:** Flow injection carbon skeleton gas chromatography. Roberts and Kahokola, 437.
- Catalytic thermometric titrimetry:** Evaluation of the reactivity of vinyl monomers by —. Kashanipour, Evans, Dajer de Torrijos and Greenhow, 436.
- Ceramic Nasicon:** A new sodium selective electrode with membrane of —. Mortensen and Jensen, 148.
- Certification:** Testing, — and distribution of reference substances within the Wellcome Foundation. Ruty, 55.
- Chair for analytical chemist:** Professor L. C. Ebdon, 344.
- Chemical hazard evaluation:** The control of chemical process hazards. Coates, 119.
- Chemical sensors:** Calorimetric methods of gas detection. Gentry and Walsh, 59.
- Detection of chlorinated hydrocarbons with tin(IV) oxide.** Guest, 58.
- Multi-sensor systems in hazard monitoring.** Bott and Jones, 61.
- Chemiluminescence:** The — determination of drugs. Abbott and Townshend, 25.
- Chemometric methods for the validation of peak homogeneity in HPLC.** Seaton, Marr, Clark and Fell, 424.
- Chlorambucil:** Reversed-phase high-performance liquid chromatography of plasma melphalan and chlorambucil: comparison of three detection methods. Adair, Thorburn Burns and Harriott, 30.
- Chlorinated hydrocarbons:** Detection of — with tin(IV) oxide. Guest, 58.
- Chromatography:** Accelerant residues and the arson investigator. Zoro, 276.
- Recent advances in —.** Adams and Shand, 45.
- Chromatography, gas - liquid:** An analysis of PCBs and organochlorine pesticides by capillary gas chromatography—a modern approach to PCB/OCP residue analysis of human milk. Seymour, Jefferies and Notarianni, 260.
- Detection of chlorinated hydrocarbons with tin(IV) oxide.** Guest, 58.
- Flow injection carbon skeleton gas chromatography.** Roberts and Kahokola, 437.
- Relationship between temperature-programmed and isothermal Kovats retention indices in gas - liquid chromatography.** Akporhonor, Lee and Taylor, 163.
- Chromatography, high-performance liquid:** APL—the ideal programming language for HPLC optimisation? Frost, 265.
- Assessment of peak homogeneity in HPLC by computer-aided photodiode array detection.** Marr, Horváth, Clark and Fell, 254.
- Chemometric methods for the validation of peak homogeneity in HPLC.** Seaton, Marr, Clark and Fell, 424.
- Chiral separation of drug enantiomers by high-performance liquid chromatography.** Noctor, Clark and Fell, 441.
- Chromatography of organic anions of clinical interest in physiological fluids.** Ersser, 305.
- Electroanalysis of pharmaceuticals.** Smyth and Egan, 87.
- HPLC determination of tricyclic antidepressants in human plasma.** Power and Daggard, 416.
- Modified sample preparation and chromatography for the separation of human bile acid conjugates.** Campbell, Harriott and Thorburn Burns, 33.
- Novel approaches to directly coupled high-performance liquid chromatography - flame atomic absorption spectrometry for trace metal speciation.** Hill, Ebdon and Jones, 6.
- Preliminary studies towards an assay for circulating vitamin B₆ levels in plasma using high-performance liquid chromatography with electrochemical detection.** Hart and Hayler, 439.
- Recent advances in the high-performance chromatography analysis of veterinary antimicrobials.** Franklin Smyth, Ayling and Smyth, 84.
- Reversed-phase high-performance liquid chromatography of plasma melphalan and chlorambucil: comparison of three detection methods.** Adair, Thorburn Burns and Harriott, 30.
- ROM-overlay programmes for the Spectra-Physics 4270 integrator.** Application to HPLC column efficiency and suitability testing. Jones, 261.
- Study of the HPLC separation of some local anaesthetics.** Hurdley, Smith, Gill and Moffat, 161.
- The UV detector—its effect on HPLC system efficiency.** Larkins and Westcott, 258.
- Chromatography, in situ complexation:** *In situ* complexation chromatography for the determination of metal ions. Heneghan and Wallace, 29.
- Chromatography, ion:** Automated suppressed ion chromatography as applied to acid rain research. Rowland, 308.
- Indirect amperometric detection of metal ions following ion chromatographic separations.** Hojabri, Lavin, Wallace and Riviello, 26.
- Chromatography, supercritical fluid:** Supercritical fluid chromatography and its combination with mass spectrometry. Berry, Games and Perkins, 451.
- Chiral separation of drug enantiomers by high-performance liquid chromatography.** Noctor, Clark and Fell, 441.
- Chromium:** Direct determination of — in gallium arsenide by electrothermal atomisation atomic absorption spectrometry with Smith - Hieftje background correction. Johnson, Headridge, McLeod, Jackson and Roberts, 8.
- Coherent forward scattering:** Models, measurements, methods and machines in analytical spectrometry. Hieftje, 382.
- Collaborative studies:** Collaborative exercise on elemental analysers. Elemental Analyser User Forum, 78.
- Validation of analytical procedures used in the food sector.** Wood, 329.
- Combustion:** The detection of hazardous — in British coal mines with gas sensors. Bergman, 274.
- Complexing groups:** Chemically modified electrodes containing — for the determination of trace metals. O'Riordan and Wallace, 14.

- Computers:** APL—the ideal programming language for HPLC optimisation? Frost, 265.
- Application of robotic principles to laboratory automation.** Pierce, 318.
- A software-controlled system for automated background correction in inductively coupled plasma - optical emission spectrometry.** Hall, Littlejohn, Ottaway and O'Haver, 18.
- Assessment of peak homogeneity in HPLC by computer-aided photodiode array detection.** Marr, Horváth, Clark and Fell, 254.
- Automated suppressed ion chromatography as applied to acid rain research.** Rowland, 308.
- Automatic detergent analysis.** MacDonald, Cooksey, Ottaway and Campbell, 448.
- Computer-controlled optimisation of an inductively coupled plasma.** Norman and Ebdon, 420.
- Expert systems in luminescence analysis.** Milne, Williams, Clark and Fell, 157.
- Knowledge communication systems.** Keen, 298.
- Low resolution monochromator system for electrothermal atomic emission spectrometry with computer controlled background correction.** Cook, Littlejohn, Ottaway and Fell, 429.
- Organic reaction prediction by computer.** Hutchings, 300.
- Quantitative and qualitative analysis using near infrared reflectance spectroscopy.** Tunnell, 299.
- ROM-overlay programmes for the Spectra-Physics 4270 integrator. Application to HPLC column efficiency and suitability testing.** Jones, 261.
- Round the clock logging—the advantage of graphics.** Cape, Milne and Leith, 156.
- Tablet dissolution testing with a laboratory robot.** Sample, 266.
- The use of microcomputer networks in pharmaceutical manufacture and analysis.** Wagland, 154.
- Two novel laboratory uses for the Apple II microcomputer.** Strutt, 153.
- Consultancy:** All the bucks stop here! Rooney, 91.
- Copper dialkyldithiophosphates:** Voltammetry of —. Hutchings, Moody and Thomas, 12.
- Correspondence:** 286.
- Coulometry:** Instrumental methods of flour analysis. Osborne, 359.
- Curve-fitting algorithms:** Comparison of — for atomic absorption spectrophotometry. Bysouth and Tyson, 21.

D

- Data logging:** Round the clock logging—the advantage of graphics. Cape, Milne and Leith, 156.
- Denton, M. B.:** Biography, 179.
- Detergent analysis:** Automatic —. MacDonald, Cooksey, Ottaway and Campbell, 448.
- Differential scanning calorimetry** of human stratum corneum: effects of penetration enhancers azone and dimethyl sulphoxide. Goodman and Barry, 397.
- Application of — in pharmacy:** prediction of solid state stability of drugs. Li Wan Po, 391.
- Application of — to the study of food behaviour.** Wright, 389.
- Purity determination** of triethanolamine alkyl sulphates. Badwan, James and Pugh, 390.
- Thermal analysis** of freeze-dried products. Phillips, Yarwood and Collett, 394.
- Diffusive sampling:** International symposium: Workplace air monitoring. — an alternative approach. Brown. (Editorial), 137.

- Dihydroxamic acids:** Voltammetric study of —. Amberson and Svehla, 443.
- Dimethyl sulphoxide:** Differential scanning calorimetry of human stratum corneum: effects of penetration enhancers azone and —. Goodman and Barry, 397.
- Diode array spectroscopy:** See Spectroscopy, diode array.
- Dispersion:** Effect of flow cell on — in flow injection analysis. Stone and Tyson, 23.
- Distinguished Service Award:** Conferred on M. A. Crook, 45. Conferred on C. J. Keattch, 45.
- Dithranol:** Melting-point of — as a standard of purity. Adnett, Smith and Wilson, 264.
- Doping agents:** Screening for — in horse racing. Moss, 48.
- Drugs:** See also Pharmaceuticals.
- Chiral separation** of drug enantiomers by high-performance liquid chromatography. Noctor, Clark and Fell, 441.
- Recent trends and developments** in techniques useful to the determination of —. Thorburn Burns, 81.
- Screening for doping agents** in horse racing. Moss, 48.
- Solid state disorder** in — and excipients. York and Grant, 396.
- The chemiluminescence determination** of —. Abbott and Townshend, 25.

E

- Editorial:** 45, 73, 137, 173, 249, 285, 317.
- Education:** "A"-level analysis. Tyson, 335.
- Electroanalysis** of pharmaceuticals. Smyth and Egan, 87.
- Electrodes:** An evaluation of a novel type of solid state sensor. Burns and Nylander, 289.
- Chemically modified —** containing complexing groups for the determination of trace metals. O'Riordan and Wallace, 14.
- Electroendosmotic flow:** Measurement of electroendosmotic flows in high-voltage capillary zone electrophoresis. Altria and Simpson, 453.
- Electron capture detection:** Electroanalysis of pharmaceuticals. Smyth and Egan, 87.
- Electron microprobe:** Analytical microscopy of mineral phases. Johnston, 353.
- Electron transduction** from enzymes and bacteria. Delaney, Bennetto, Mason, Roller, Stirling and Thurston, 143.
- Electrothermal atomisation:** Clinical applications of electrothermal atomic absorption spectrometry with Zeeman-effect background correction. Egila, Littlejohn, Ottaway and Xiao-quan, 426.
- Direct determination** of chromium in gallium arsenide by — atomic absorption spectrometry with Smith - Hieftje background correction. Johnson, Headridge, McLeod, Jackson and Roberts, 8.
- Low resolution monochromator system** for electrothermal atomic emission spectrometry with computer controlled background correction. Cook, Littlejohn, Ottaway and Fell, 429.
- Electrothermal vaporisation:** Direct determination of volatile trace elements in nickel-base alloys by — inductively coupled plasma - atomic emission spectrometry. Clarke, McLeod, Mowthorpe and Lee, 15.
- Elemental analysers:** Collaborative exercise on —. Elemental Analyser User Forum, 78.
- Environmental analysis:** Expert systems in luminescence analysis. Milne, Williams, Clark and Fell, 157.
- Round the clock logging—the advantage** of graphics. Cape, Milne and Leith, 156.
- Enzyme electrode systems** for glucose analysis. Moody, Sanghera and Thomas, 446.
- Blood glucose determination** using an — based on the quinoprotein, glucose dehydrogenase. Mullen, Churhouse, Keedy and Vadgama, 145.

Enzyme electrode—continued

- Enzyme-modified ion-sensitive field effect transistors: theoretical and practical considerations. Eddowes, Pedley and Webb, 152.
- Enzymes:** Autumn meeting: enzymes and antibodies. Worsfold. (Editorial), 285.
- Electron transduction from — and bacteria. Delaney, Bennetto, Mason, Roller, Stirling and Thurston, 143.
- Equipment news:** 37, 65, 93, 128, 165, 279, 310, 337, 366, 401, 455.
- Errors:** Some statistical comments on the — in NIR calibrations. Fearn, 123.
- Ethanol:** Automated determination of — using the enzyme alcohol oxidase. Gibson and Woodward, 360.
- European analysis:** European Analytical Column 9. Federation of European Chemical Societies Working Party on Analytical Chemistry, 253.
- Evidential breath testing.** Denney. (Editorial), 73.
- Explosives:** Did it fall or was it pushed? Gilbert, 273.
- Validation of test methods for the quality assurance of — in the Ministry of Defence. Macleod, 328.

F

- Fat:** Determination of oil or — in feeds and food. Manley. (Correspondence), 286.
- Feeds:** Determination of oil or fat in — and food. Manley. (Correspondence), 286.
- Flame:** Smoke and —: the hazard and the remedy. Haines and Skinner, 121.
- Flame atomisation:** Novel approaches to directly coupled high-performance liquid chromatography - flame atomic absorption spectrometry for trace metal speciation. Hill, Ebdon and Jones, 6.
- On-line sample and standard manipulation for flame atomic absorption spectrometry. Bysouth and Tyson, 412.
- Flour:** Instrumental methods of — analysis. Osborne, 359.
- Flow cell:** Effect of — on dispersion in flow injection analysis. Stone and Tyson, 23.
- Flow injection analysis** as a sample handling technique for diode array spectroscopy. Wolf and Worsfold, 365.
- Determination of dissolved humic substances in river waters using — with fluorimetric detection. McCrum, 307.
- Effect of flow cell on dispersion in —. Stone and Tyson, 23.
- Extended range calibrations by —. Tyson, 304.
- Flow injection carbon skeleton gas chromatography. Roberts and Kahokola, 437.
- Flow injection determination of 5-fluorouracil with voltammetric detection. Bouzid and Macdonald, 295.
- Indirect assays with immobilised firefly luciferase based on —. Nabi and Worsfold, 415.
- Lithium ion-selective electrodes in —. Gadzekpo, Moody and Thomas, 62.
- On-line voltammetric analysis of aniline. Taylor and Edmonds, 28.
- Reductive determination of metal ions by — using amperometric amalgam detectors. Eadington and Dalziel, 434.
- The chemiluminescence determination of drugs. Abbott and Townshend, 25.
- Use of activated alumina as a column packing material for adsorption of oxyanions in — with ICP - AES detection. Cook, McLeod and Worsfold, 5.
- Fluorimetric detection:** Determination of dissolved humic substances in river waters using flow injection analysis with —. McCrum, 307.
- 5-Fluorouracil:** Flow injection determination of — with voltammetric detection. Bouzid and Macdonald, 295.
- Fly ash:** Light scattering from —. Boothroyd, 51.

- Food:** Application of DSC to the study of — behaviour. Wright, 389.
- Biosensors for the — industry. Kress-Rogers and D'Costa, 149.
- Determination of oil or fat in feeds and —. Manley. (Correspondence), 286.
- Validation of analytical procedures used in the — sector. Wood, 329.
- Fourier transform spectroscopy** with an infrared microscope. Turner, 268.
- Freeze-dried products:** Thermal analysis of —. Phillips, Yarwood and Collett, 394.

G

- Gallium arsenide:** Direct determination of chromium in — by electrothermal atomisation atomic absorption spectrometry with Smith - Hieftje background correction. Johnson, Headridge, McLeod, Jackson and Roberts, 8.
- Gas chromatography - mass spectrometry:** Flow injection carbon skeleton gas chromatography. Roberts and Kahokola, 437.
- Gas detection:** Calorimetric methods of —. Gentry and Walsh, 59.
- Gas - liquid chromatography:** See Chromatography, gas - liquid.
- Gas sensors:** Accelerant residues and the arson investigator. Zoro, 276.
- The detection of hazardous combustion in British coal mines with —. Bergman, 274.
- Glucose:** Enzyme electrode systems for — analysis. Moody, Sanghera and Thomas, 446.
- Glucose dehydrogenase:** Blood glucose determination using an enzyme electrode based on the quinoprotein, —. Mullen, Churchouse, Keedy and Vadgama, 145.
- Glucose electrodes:** Biosensors for the food industry. Kress-Rogers and D'Costa, 149.
- Studies on needle —. Churchouse, Mullen, Keedy, Battersby and Vadgama, 146.
- Graphics:** Round the clock logging—the advantage of —. Cape, Milne and Leith, 156.
- Group additivity scheme:** Microcalorimetric bioassay and the development of a — for biological response. Beezer, Volpe, Gooch and Hunter, 399.

H

- Hazards:** Multi-sensor systems in hazard monitoring. Bott and Jones, 61.
- Smoke and flame: the hazard and the remedy. Haines and Skinner, 121.
- The control of chemical process —. Coates, 119.
- The detection of hazardous combustion in British coal mines with gas sensors. Bergman, 274.
- Thermal hazard evaluation by accelerating rate calorimetry. Ottaway, 116.
- High-performance liquid chromatography:** See Chromatography, high-performance liquid.
- High-voltage capillary zone electrophoresis:** Measurement of electroosmotic flows in —. Altria and Simpson, 453.
- Hilger Spectroscopy Prize 1985:** Awarded to M. J. Cope, 47.
- Horse:** Screening for doping agents in — racing. Moss, 48.
- Hot-stage melting-point apparatus:** Melting-point of dithranol as a standard of purity. Adnett, Smith and Wilson, 264.
- Humic substances:** Determination of dissolved — in river waters using flow injection analysis with fluorimetric detection. McCrum, 307.

Hungarian mines, minerals and mineral waters: Robert Boyle (1627-1691): a foundation stone of analytical chemistry in the British Isles. Part V. Biography. Thorburn Burns, 349.
Hydration: Studies in polymorphism and —. Smith, 388.

I

Inductively coupled plasma: Computer-controlled optimisation of an —. Norman and Ebdon, 420.
Inductively coupled plasma - atomic emission spectrometry: Evaluation of analytical instrumentation. Part III. Polychromators for use in emission spectrometry with ICP sources. Analytical Methods Committee, 109.
 A software-controlled system for automatic background correction in —. Hall, Littlejohn, Ottaway and O'Haver, 18.
 Direct determination of volatile trace elements in nickel-base alloys by electrothermal vaporisation —. Clarke, McLeod, Mowthorpe and Lee, 15.
 Slurry atomisation for agricultural samples by plasma emission spectrometry. Sparkes and Ebdon, 410.
 Use of activated alumina as a column packing material for adsorption of oxyanions in flow injection analysis with — detection. Cook, McLeod and Worsfold, 5.
Industry: The training of analysts for the pharmaceutical industry—industrial requirements. Dobson, 325.
Infrared lasers: Trace gas detection using —. Johnson, 1.
Infrared microscope: Fourier transform spectroscopy with an infrared microscope. Turner, 268.
Infrared spectrometry: See *Spectrometry, infrared*.
Injections: Stability of pralidoxime mesylate —. Holcombe, 320.
Inorganic lead: Voltammetric determination of — and dimethyl- and trimethyllead species in mixtures. Hayes and Smyth, 34.
In situ complexation chromatography: See *Chromatography, in situ complexation*.
In vivo analysis: Potentiometric methods of —. Martin and Rolfe, 303.
Ion chromatography: See *Chromatography, ion*.
Ion-selective electrodes: A new sodium selective electrode with membrane of ceramic Nasicon. Mortensen and Jensen, 148.
 Lithium — in flow injection analysis. Gadzekpo, Moody and Thomas, 62.
Ion-sensitive field effect transistors: Enzyme-modified —: theoretical and practical considerations. Eddowes, Pedley and Webb, 152.
 Some parameters of — (ISFET) sensors. Moody, Slater and Thomas, 287.
 Use of — in the photographic industry. Thomason, 293.
Iron: Robert Boyle (1627-1691): a foundation stone of analytical chemistry in the British Isles. Part IV. Robert Boyle's determination of — in Tunbridge water: the earliest quantitative colorimetric reaction? Thorburn Burns, 75.
IUPAC recommendations on nomenclature and symbols, 405.

K

Kemula, W.: Obituary. Hulanicki, 77.
Gordon F. Kirkbright bursary fund: 66.
Knowledge communication systems. Keen, 298.
Knox, J. H.: Biography, 179.

L

Laboratory automation: Application of robotic principles to —. Pierce, 318.

Laboratory equipment: Two novel laboratory uses for the Apple II microcomputer. Strutt, 153.
Lasers: See also *Infrared lasers*.
 Models, measurements, methods and machines in analytical spectrometry. Hieftje, 382.
Laser Raman microscope: Applications of the —. Lander, 270.
Leather, A. M.: (Obituary), 253.
Light scattering from fly ash. Boothroyd, 51.
Lithium ion-selective electrodes in flow injection analysis. Gadzekpo, Moody and Thomas, 62.
Local anaesthetics: Study of the HPLC separation of some —. Hurdley, Smith, Gill and Moffat, 161.
Low resolution monochromator system for electrothermal atomic emission spectrometry with computer controlled background correction. Cook, Littlejohn, Ottaway and Fell, 429.
Luciferase: Indirect assays with immobilised firefly — based on flow injection analysis. Nabi and Worsfold, 415.
Luminescence spectrometry: See *Spectrometry, luminescence*.
L'vov, B. V.: Biography, 180.
 Professor L'vov to visit Glasgow in October 1986. Ottaway, 317.

M

Mass spectrometry: See *Spectrometry, mass*.
Mathematical methods: Comparison of curve-fitting algorithms for atomic absorption spectrophotometry. Bysouth and Tyson, 21.
Melphalan: Reversed-phase high-performance liquid chromatography of plasma — and chlorambucil: comparison of three detection methods. Adair, Thorburn Burns and Harriott, 30.
Melting-point of dithranol as a standard of purity. Adnett, Smith and Wilson, 264.
Metal ions: Indirect amperometric detection of metal ions following ion chromatographic separations. Hojabri, Lavin, Wallace and Riviello, 26.
In situ complexation chromatography for the determination of —. Heneghan and Wallace, 29.
 Reductive determination of — by flow injection analysis using amperometric amalgam detectors. Eadington and Dalziel, 434.
Microcalorimetry: Microcalorimetric bioassay and the development of a group additivity scheme for biological response. Beezer, Volpe, Gooch and Hunter, 399.
Microelectronic techniques: Microelectronic pH sensors. Parr, Wilson and Kelly, 291.
Microemulsions: Analytical applications of —. Memon and Worsfold, 418.
Microscopy: Analytical — of mineral phases. Johnston, 353.
Milk, human: An analysis of PCBs and organochlorine pesticides by capillary gas chromatography—a modern approach to PCB/OCF residue analysis of human milk. Seymour, Jefferies and Notarianni, 260.
Minerals: Analytical microscopy of mineral phases. Johnston, 353.
 Application of neutron activation to — analysis. Parry, 355.
 Neutron activation analysis of stable isotopic tracers for studies of mineral bioavailability. Whitley and Aggett, 363.
 Sampling and sampling problems relating to —. Collins, 352.
Mines: The detection of hazardous combustion in British coal — with gas sensors. Bergman, 274.

N

- NATLAS:** Role of — in quality control in chemical laboratories. Broderick, 328.
- Near infrared spectrometry:** See Spectrometry, near infrared.
- Nephelometry:** Instrumental methods of flour analysis. Osborne, 359.
- Neutron activation analysis** of stable isotopic tracers for studies of mineral bioavailability. Whitley and Aggett, 363.
- Applications of neutron activation to minerals analysis. Parry, 355.
- Needle electrodes:** Studies on needle glucose electrodes. Churchouse, Mullen, Keedy, Battersby and Vadgama, 146.
- Nickel-base alloys:** Direct determination of volatile trace elements in — by electrothermal vaporisation - inductively coupled plasma - atomic emission spectrometry. Clarke, McLeod, Mowthorpe and Lee, 15.

O

- Obituary:** 77, 253, 400, 409.
- Occupational hygiene:** AQUA scheme for analytical quality assurance in —. West, 330.
- Oil:** Determination of — or fat in feeds and food. Manley. (Correspondence), 286.
- Open learning:** Analytical chemistry by —. Chadwick, Currell and James, 380.
- Pollution control distance learning. Shepherd, 381.
- Optical fibres:** Models, measurements, methods and machines in analytical spectrometry. Hieftje, 382.
- Organic anions:** Chromatography of — of clinical interest in physiological fluids. Ersser, 305.
- Organic crystals:** Some applications of thermosonimetry to —. Clark, 393.
- Organic reaction prediction** by computer. Hutchings, 300.
- Organochlorine pesticides:** An analysis of PCBs and — by capillary gas chromatography—a modern approach to PCB/OCP residue analysis of human milk. Seymour, Jefferies and Notarianni, 260.
- Organolead species:** Voltammetric determination of inorganic lead and dimethyl- and trimethyllead species in mixtures. Hayes and Smyth, 34.
- OSCA chemical sensing group:** 169.
- Ottaway, J. M.:** Obituary. Townshend, 409.
- Oxyanions:** Use of activated alumina as a column packing material for adsorption of — in flow injection analysis with ICP - AES detection. Cook, McLeod and Worsfold, 5.

P

- Particle size measurement** by auto-correlation spectroscopy. Lines, 51.
- Peak homogeneity:** Assessment of — in HPLC by computer-aided photodiode array detection. Marr, Horváth, Clark and Fell, 254.
- Chemometric methods for the validation of — in HPLC. Seaton, Marr, Clark and Fell, 424.
- Penetration enhancers:** Differential scanning calorimetry of human stratum corneum: effects of — azone and dimethyl sulphoxide. Goodman and Barry, 397.
- Pesticide:** Reference materials for — analysis. Head, 56.
- Pharmaceuticals:** See also Drugs.
- Application of differential scanning calorimetry in pharmacy: prediction of solid state stability of drugs. Li Wan Po, 391.
- Electroanalysis of —. Smyth and Egan, 87.

- Pharmaceutical applications of polarographic analysis. Woolfson, 89.
- The qualified person. Henman, 322.
- The training of analysts for the pharmaceutical industry— industrial requirements. Dobson, 325.
- The use of microcomputer networks in pharmaceutical manufacture and analysis. Wagland, 154.
- Photodiode array detection:** Assessment of peak homogeneity in HPLC by computer-aided —. Marr, Horváth, Clark and Fell, 254.
- Photographic industry:** Use of ion-sensitive field effect transistors in the —. Thomason, 293.
- Physiological fluids:** See also Blood.
- Chromatography of organic anions of clinical interest in —. Ersser, 305.
- Plant breeding:** Near infrared reflectance analysis in —. Smith and Starr, 125.
- Polarography:** Pharmaceutical applications of polarographic analysis. Woolfson, 89.
- Voltammetry of copper dialkyldithiophosphates. Hutchings, Moody and Thomas, 12.
- Polychlorinated biphenyls:** An analysis of PCBs and organochlorine pesticides by capillary gas chromatography—a modern approach to PCB/OCP residue analysis of human milk. Seymour, Jefferies and Notarianni, 260.
- Polychromators:** Evaluation of analytical instrumentation. Part III. — for use in emission spectrometry with ICP sources. Analytical Methods Committee, 109.
- Polymorphism:** Studies in — and hydration. Smith, 388.
- Potentiometric methods** of *in vivo* analysis. Martin and Rolfe, 303.
- Pralidoxime mesylate:** Stability of — injections. Holcombe, 320.
- Precambrian soil profile:** The chemistry of a —. Cardenas, Cooksey, Ottaway, Allison and Russell, 10.
- Protein:** Novel method for the determination of arsenic, antimony and selenium in single-cell — (Pruteen). McCabe and Ottaway, 16.
- PSA '85:** The — International Conference, 47.
- Publications received:** 40, 67, 133, 168, 282, 312, 344, 405.
- Publicity:** Honorary Publicity Secretary's column, 250.

Q

- Qualified person:** The —. Henman, 322.
- Quality assurance:** AQUA scheme for analytical — in occupational hygiene. West, 330.
- Validation of test methods for the — of explosives in the Ministry of Defence. Macleod, 328.
- Quality control:** Role of NATLAS in — in chemical laboratories. Broderick, 328.

R

- Raman spectroscopy:** See Spectroscopy, Raman.
- Reference materials** for pesticide analysis. Head, 56.
- Testing, certification and distribution of reference substances within the Wellcome Foundation. Rutty, 55.
- Retention indices:** Relationship between temperature-programmed and isothermal Kovats — in gas - liquid chromatography. Akporhonor, Lee and Taylor, 163.
- Study of the HPLC separation of some local anaesthetics. Hurdley, Smith, Gill and Moffat, 161.
- Reversed-phase high-performance liquid chromatography** of plasma melphalan and chlorambucil: comparison of three detection methods. Adair, Thorburn Burns and Harriott, 30.
- Robot:** Application of robotic principles to laboratory automation. Pierce, 318.

- Tablet dissolution testing with a laboratory —. Sample, 266.
- Rocks:** The chemistry of a Precambrian soil profile. Cardenas, Cooksey, Ottaway, Allison and Russell, 10.
- ROM-overlay programmes** for the Spectra-Physics 4270 integrator. Application to HPLC column efficiency and suitability testing. Jones, 261.
- Royal Society of Chemistry awards:** 285.
- S**
- SAC 86/3rd BNASS: N.b.:** Pages 173–248 were entirely devoted to the SAC 86/3rd BNASS conference. For an index to the scientific contributions, see Name Index (pp. 7–14).
- Cobb, 174.
- Jones. (Editorial), 173.
- Acknowledgements, 175.
- Alterations to — programme. Thomas, 375.
- Conference committees, 174.
- Exhibition, 40, 245.
- Opening ceremony, 182.
- Retrospective view of —. Fogg, 373.
- Scientific programme, 96, 183.
- Social programme, 67, 181.
- Synopses of papers and posters, 196.
- Update courses, 167, 194.
- Workshops, 193.
- Sample preparation:** Modified — and chromatography for the separation of human bile acid conjugates. Campbell, Harriott and Thorburn Burns, 33.
- Sampling and —** problems relating to minerals. Collins, 352.
- Schools analyst competitions—**an industrial viewpoint. Weller, 334.
- a report on their nature and structure. Thomas, 333.
- "A"-level analysis. Tyson, 335.
- Analyst competitions: a participating teacher's point of view. Stranz, 334.
- Selenium:** Novel method for the determination of arsenic, antimony and — in single-cell protein (Pruteen). McCabe and Ottaway, 16.
- Sensors:** An evaluation of a novel type of solid state sensor. Burns and Nylander, 289.
- Microelectronic pH —. Parr, Wilson and Kelly, 291.
- Multi-sensor systems in hazard monitoring. Bott and Jones, 61.
- Smoke without fire. Christopher, 271.
- Some parameters of ion-sensitive field effect transistor (ISFET) —. Moody, Slater and Thomas, 287.
- Silver Medal:** Awarded to L. C. Ebdon and J. F. Tyson, 312.
- Silver - silver chloride electrode:** An evaluation of a novel type of solid state sensor. Burns and Nylander, 289.
- Slurry atomisation** for agricultural samples by plasma emission spectrometry. Sparkes and Ebdon, 410.
- Smith - Hieftje background correction:** Direct determination of chromium in gallium arsenide by electrothermal atomisation atomic absorption spectrometry with —. Johnson, Headridge, McLeod, Jackson and Roberts, 8.
- Smoke and flame:** the hazard and the remedy. Haines and Skinner, 121.
- without fire. Christopher, 271.
- Society for Analytical Chemistry:** See also SAC 86/3rd BNASS.
- Silver Medal awarded to L. C. Ebdon, 312.
- Silver Medal awarded to J. F. Tyson, 312.
- Sodium:** A new — selective electrode with membrane of ceramic Nasicon. Mortensen and Jensen, 148.
- Solid-state disorder** in drugs and excipients. York and Grant, 396.
- Solid state stability of drugs:** Application of differential scanning calorimetry in pharmacy: prediction of —. Li Wan Po, 391.
- Solution calorimetry:** Thermal analysis of freeze-dried products. Phillips, Yarwood and Collett, 394.
- Spectrometry, atomic absorption:** Clinical applications of electrothermal atomic absorption spectrometry with Zeeman-effect background correction. Egila, Littlejohn, Ottaway and Xiao-quan, 426.
- Comparison of curve-fitting algorithms for atomic absorption spectrophotometry. Bysouth and Tyson, 21.
- Direct determination of chromium in gallium arsenide by electrothermal atomisation atomic absorption spectrometry with Smith - Hieftje background correction. Johnson, Headridge, McLeod, Jackson and Roberts, 8.
- Novel approaches to directly coupled high-performance liquid chromatography - flame absorption spectrometry for trace metal speciation. Hill, Ebdon and Jones, 6.
- Novel method for the determination of arsenic, antimony and selenium in single-cell protein (Pruteen). McCabe and Ottaway, 16.
- On-line sample and standard manipulation for flame atomic absorption spectrometry. Bysouth and Tyson, 412.
- Spectrometry, atomic emission:** See also Inductively coupled plasma - atomic emission spectrometry.
- Evaluation of analytical instrumentation. Part III. Polychromators for use in emission spectrometry with ICP sources. Analytical Methods Committee, 109.
- Low resolution monochromator system for electrothermal atomic emission spectrometry with computer controlled background correction. Cook, Littlejohn, Ottaway and Fell, 429.
- Spectrometry, candoluminescence:** Candoluminescence spectrometry with a vidicon detector. Al-Sowdani, 432.
- Spectrometry, fluorescence:** Models, measurements, methods and machines in analytical spectrometry. Hieftje, 382.
- Spectrometry, infrared:** Fourier transform spectroscopy with an infrared microscope. Turner, 268.
- Spectrometry, luminescence.** Expert systems in luminescence analysis. Milne, Williams, Clark and Fell, 157.
- Spectrometry, mass:** Supercritical fluid chromatography and its combination with mass spectrometry. Berry, Games and Perkins, 451.
- Spectrometry, near infrared:** Application of near infrared analysis in brewing. Halsey, 126.
- Quantitative and qualitative analysis using near infrared reflectance spectroscopy. Tunnell, 299.
- Some statistical comments on the errors in NIR calibrations. Fearn, 123.
- Spectrometry, near infrared reflectance:** Instrumental methods of flour analysis. Osborne, 359.
- Near infrared reflectance analysis in plant breeding. Smith and Starr, 125.
- Spectroscopy, auto-correlation.** Particle size measurement by auto-correlation spectroscopy. Lines, 51.
- Spectroscopy, diode array:** Flow injection analysis as a sample handling technique for diode array spectroscopy. Wolf and Worsfold, 365.
- Spectroscopy, Raman:** Applications of the laser Raman microscope. Lander, 270.
- Stability tests:** Stability of pralidoxime mesylate injections. Holcombe, 320.
- Stable isotopic tracers:** Neutron activation analysis of — for studies of mineral bioavailability. Whitley and Aggett, 363.
- Statistics:** Some statistical comments on the errors in NIR calibrations. Fearn, 123.
- Stereospecific analyses:** Recent trends and developments in techniques useful to the determination of drugs. Thorburn Burns, 81.

Stratum corneum: Differential scanning calorimetry of human —: effects of penetration enhancers azone and dimethyl sulphoxide. Goodman and Barry, 397.

Supercritical fluid chromatography: See Chromatography, supercritical fluid.

Surfactants: Analytical applications of microemulsions. Memon and Worsfold, 418.

T

Tablets: Tablet dissolution testing with a laboratory robot. Sample, 266.

Test methods: Validation of — for the quality assurance of explosives in the Ministry of Defence. Macleod, 328.

Theophilus Redwood lecture: 16th — awarded to A. M. Ure, 45.

Thermal hazard evaluation by accelerating rate calorimetry. Ottaway, 116.

Thermosonimetry: Some applications of — to organic crystals. Clark, 393.

Thick film pH sensor: Microelectronic pH sensors. Parr, Wilson and Kelly, 291.

Tin(IV) oxide: Detection of chlorinated hydrocarbons with —. Guest, 58.

Tölg, G.: Biography, 180.

Trace elements: Direct determination of volatile — in nickel-base alloys by electrothermal vaporisation - inductively coupled plasma - atomic emission spectrometry. Clarke, McLeod, Mowthorpe and Lee, 15.

Trace gas detection using infrared lasers. Johnson, 1.

Trace metals: Chemically modified electrodes containing complexing groups for the determination of —. O'Riordan and Wallace, 14.

Novel approaches to directly coupled high-performance liquid chromatography - flame atomic absorption spectrometry for trace metal speciation. Hill, Ebdon and Jones, 6.

Training: The — of analysts for the pharmaceutical industry—industrial requirements. Dobson, 325.

Tricyclic antidepressants: HPLC determination of — in human plasma. Power and Dadgar, 416.

Triethanolamine alkyl sulphates: Purity determination of —. Badwan, James and Pugh, 390.

U

UK ICP - MS users' group: The —, 95.

Ultraviolet detector: The — its effect on HPLC system efficiency. Larkins and Westcott, 258.

V

Veterinary antimicrobials: Recent advances in the high-performance liquid chromatography analysis of —. Franklin Smyth, Ayling and Smyth, 84.

Vidicon detector: Candeluminescence spectrometry with a —. Al-Sowdani, 432.

Vinyl monomers: Evaluation of the reactivity of — by catalytic thermometric titrimetry. Kashanipour, Evans, Dajer de Torrijos and Greenhow, 436.

Vitamin B₆: Preliminary studies towards an assay for circulating — levels in plasma using a high-performance liquid chromatography with electrochemical detection. Hart and Hayler, 439.

Voltammetry of copper dialkyldithiophosphates. Hutchings, Moody and Thomas, 12.

Flow injection determination of 5-fluorouracil with voltammetric detection. Bouzid and Macdonald, 295.

On-line voltammetric analysis of aniline. Taylor and Edmonds, 28.

Voltammetric determination of inorganic lead and dimethyl- and trimethyllead species in mixtures. Hayes and Smyth, 34.

Voltammetric study of dihydroxamic acids. Amberson and Svehla, 443.

W

Water: Determination of dissolved humic substances in river — using flow injection analysis with fluorimetric detection. McCrum, 307.

Robert Boyle (1627–1691): a foundation stone of analytical chemistry in the British Isles. Part IV. Robert Boyle's determination of iron in Tunbridge —: the earliest quantitative colorimetric reaction? Thorburn Burns, 75.

The sources and significance of arsenic methylation in estuarine waters. Walton, Ebdon and Millward, 422.

Whisky: Methods of analysis used for investigating — complaints. Cochrane, 357.

Workplace air monitoring: International symposium: —. Diffusive sampling—an alternative approach. Brown. (Editorial), 137.

X

X-ray powder diffraction: Thermal analysis of freeze-dried products. Phillips, Yarwood and Collett, 394.

Z

Zeeman-effect: Clinical applications of electrothermal atomic absorption spectrometry with — background correction. Egila, Littlejohn, Ottaway and Xiao-quan, 426.

